Honey Badger

uServer Model

Wiwynn Incorporated
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```
562R2F- GP
562 = 562 ohm, (2K2R means 2.2K ohm)
2 = size 0402
F = 1% tolerance
GP= Green Part (RoHS)
RC size code as below:
1 = 0201
2= 0402
3= 0603
5= 0805
6= 1206
R tolerance code as below:
D=0.5%
F= 1%
J= 5%
```

```
SCD1U10V2KX-5GP
D1U = 0.1uF (2D2U means 2.2uF)
10Voltage (6D3V means 6.3V)
2 = size 0402, K tolerance
K=tolerance
[C code as below:]
G=2%
J=5%
K=10%
M=20%
X=temp characteristics
[C Series/Temp]
N=NPO
X=X7R/X5R
Y=Y5V
-5=different symbol/customer
GP= Green Part (RoHS)
```


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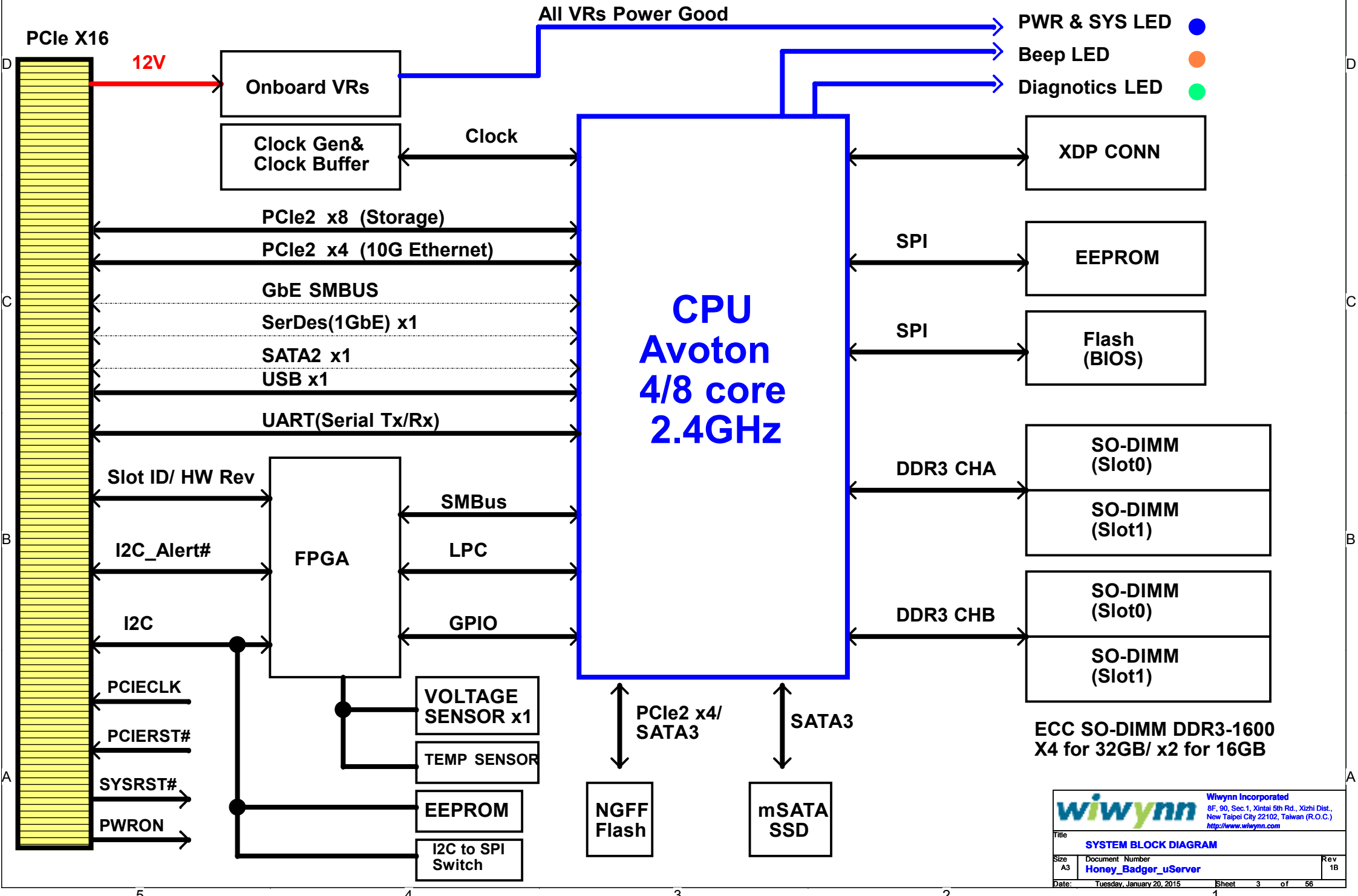
Honey Badger uServer Block Diagram



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Title	SYSTEM BLOCK DIAGRAM	
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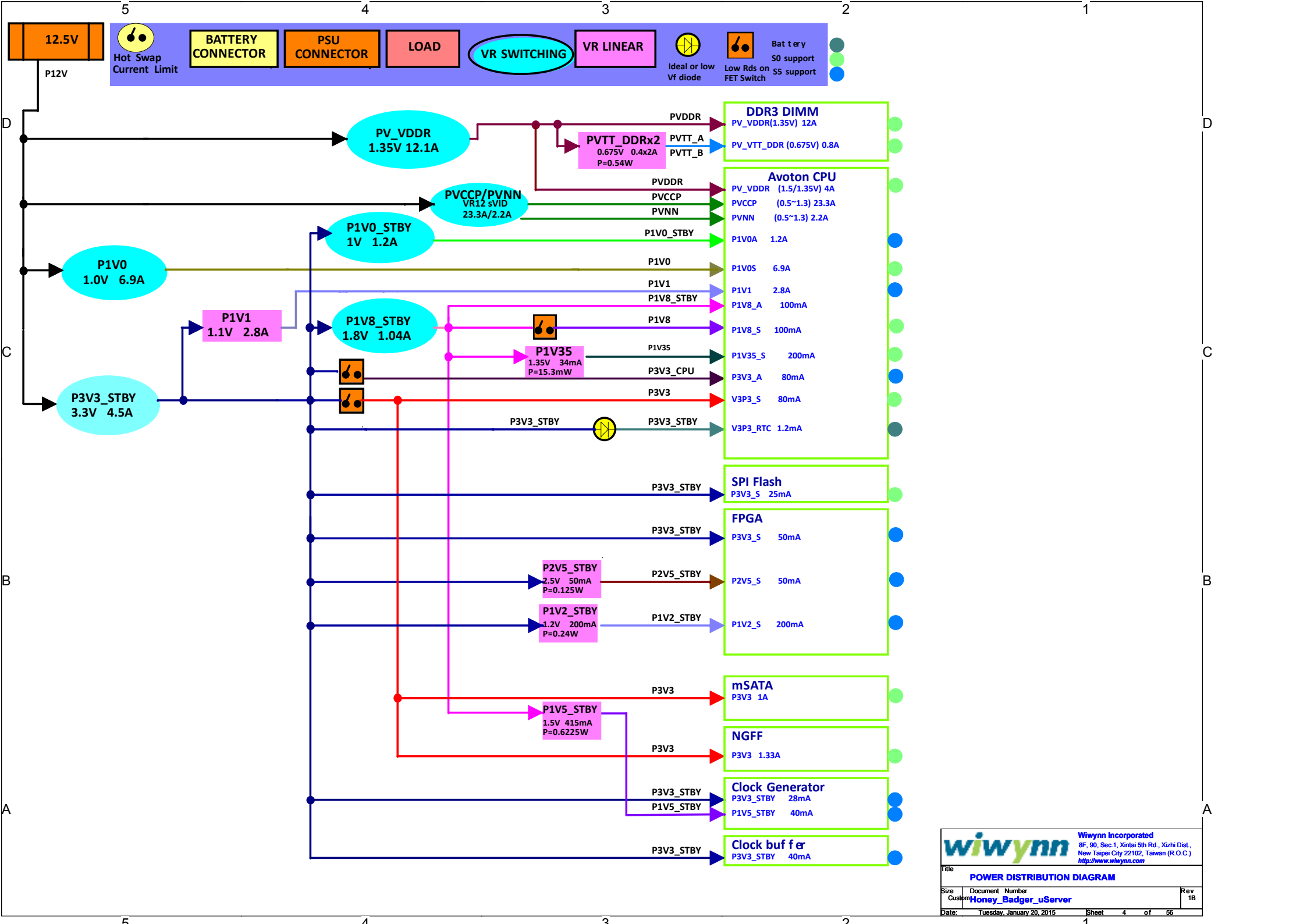

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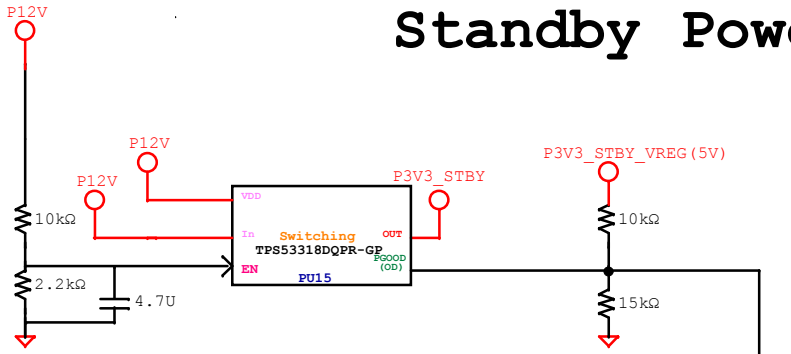
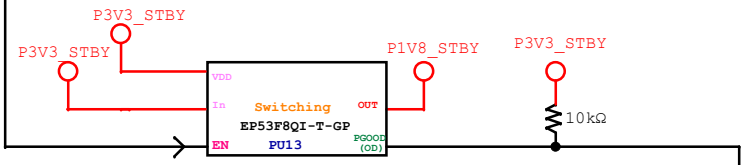
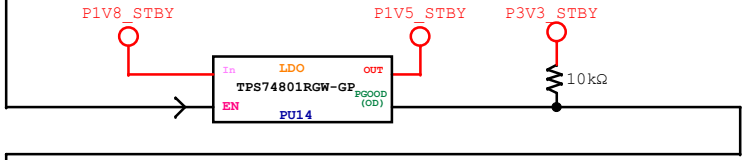
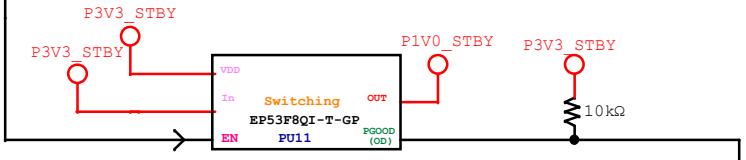
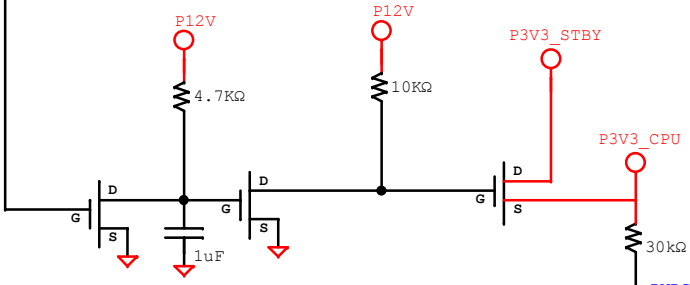
Standby Power



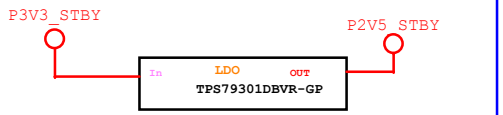


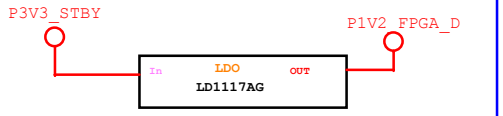


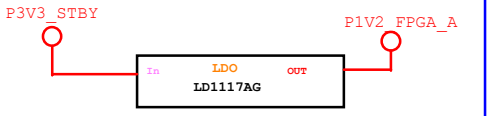


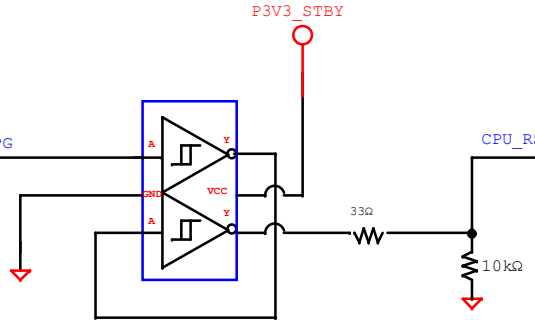


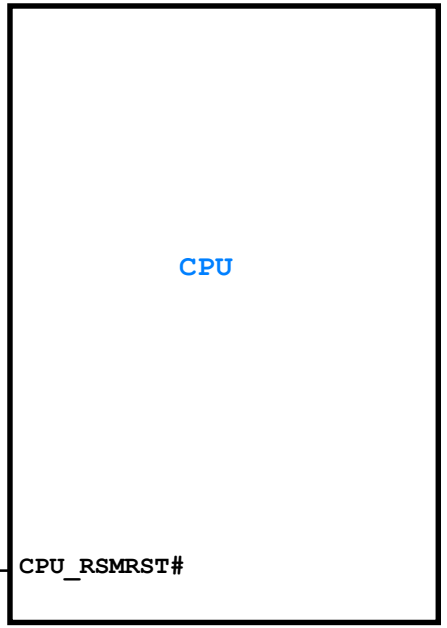
LDO solution for FPGA











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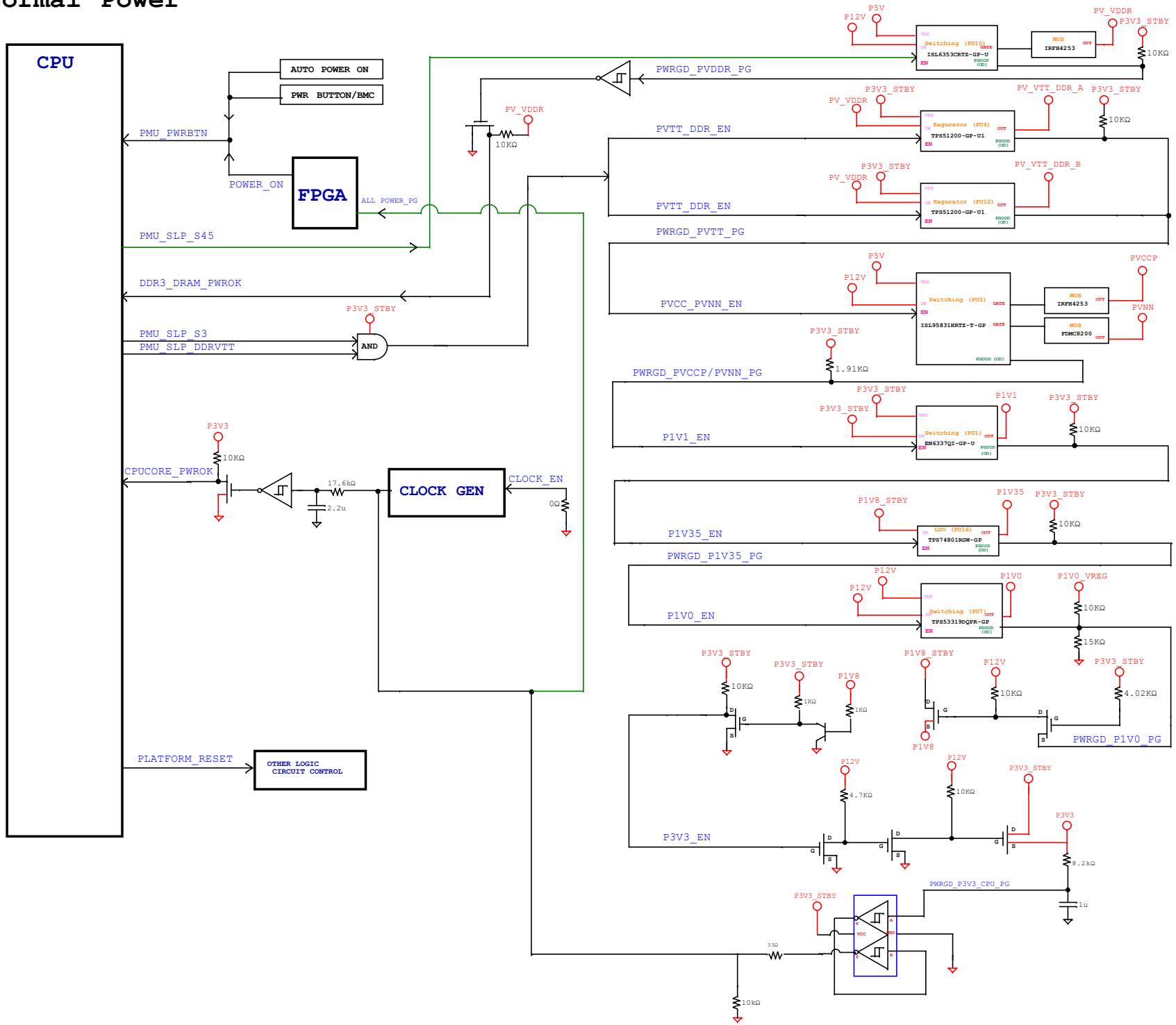
Normal Power



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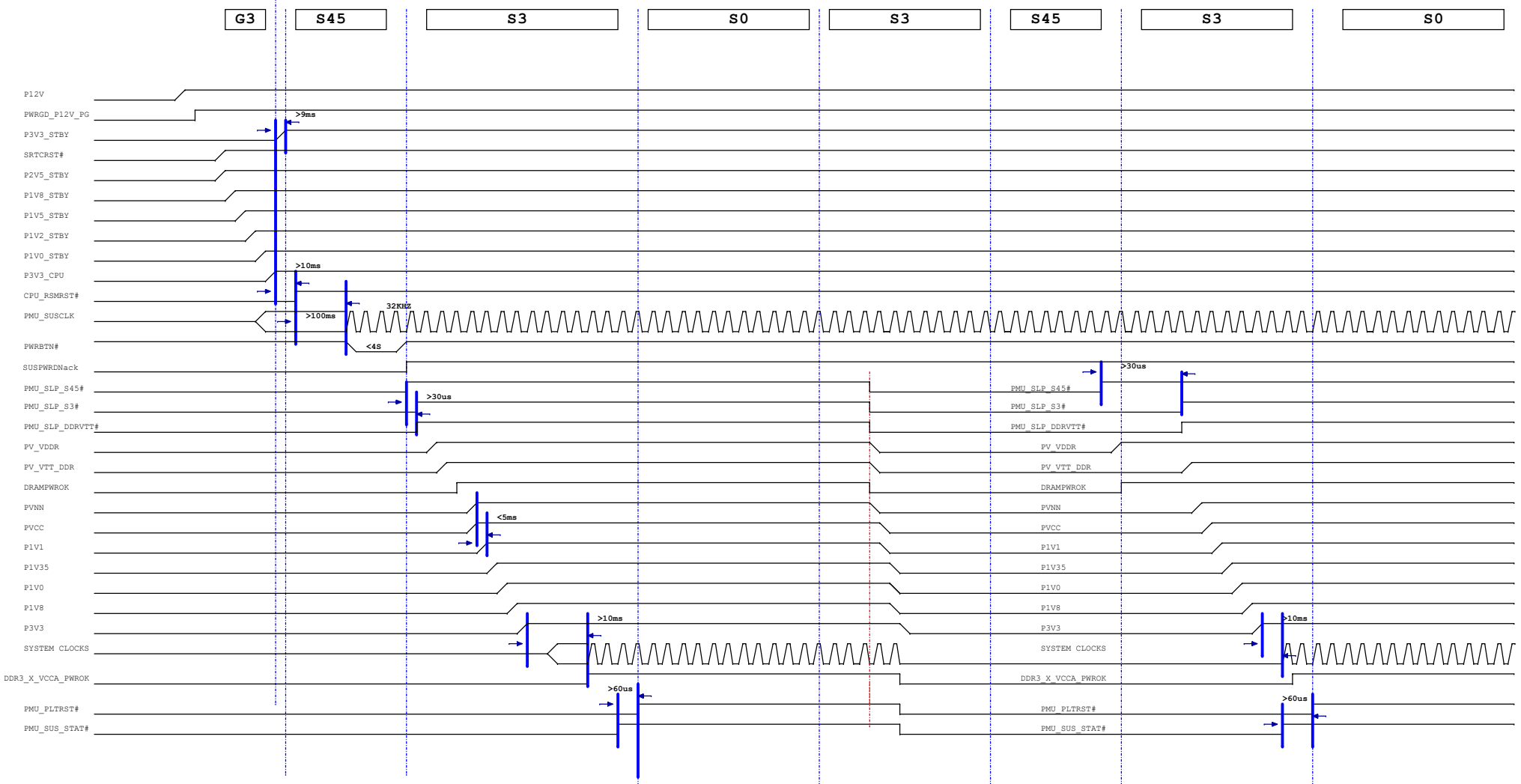
POWER SEQUENCE DIAGRAM



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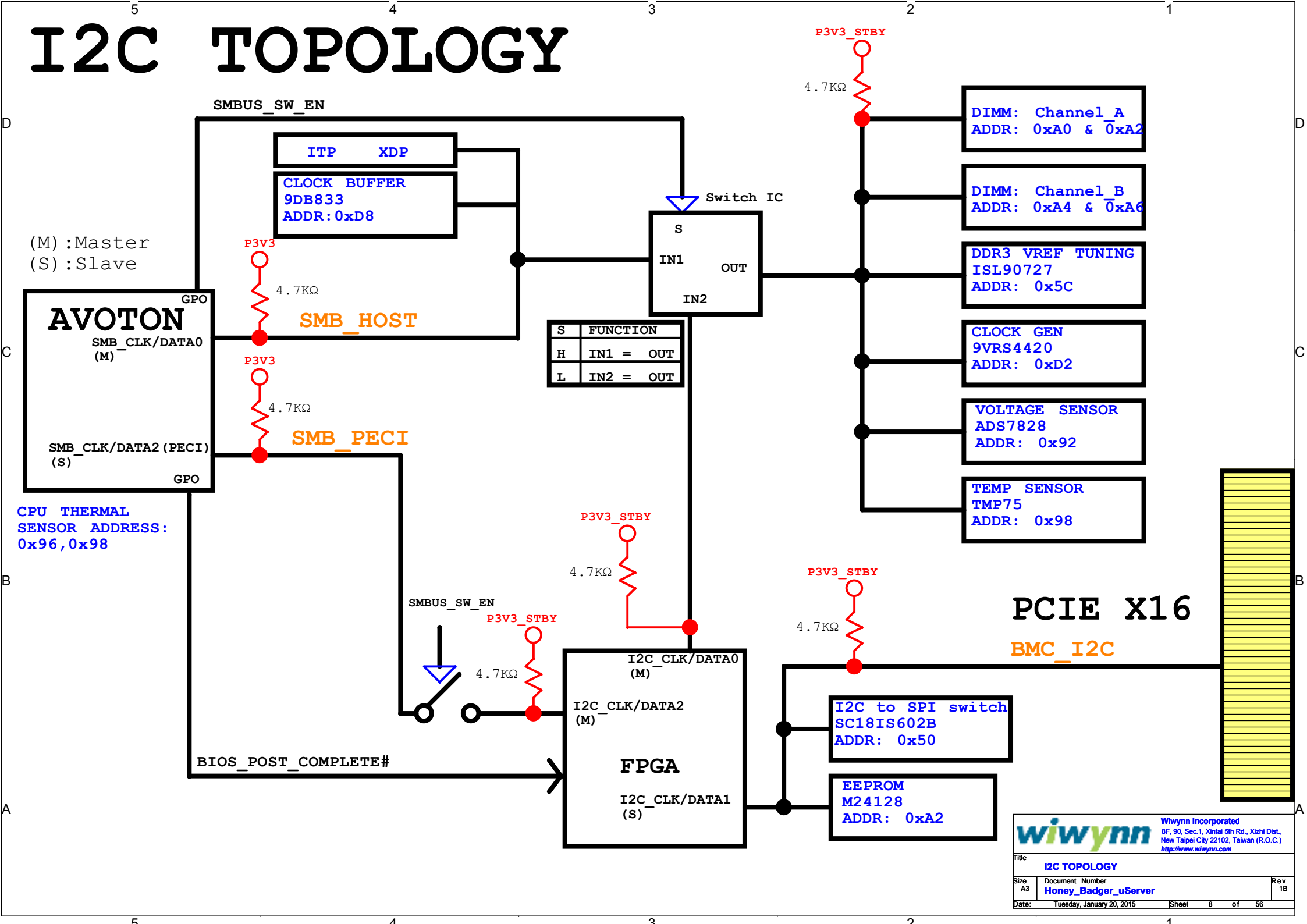
I2C TOPOLOGY



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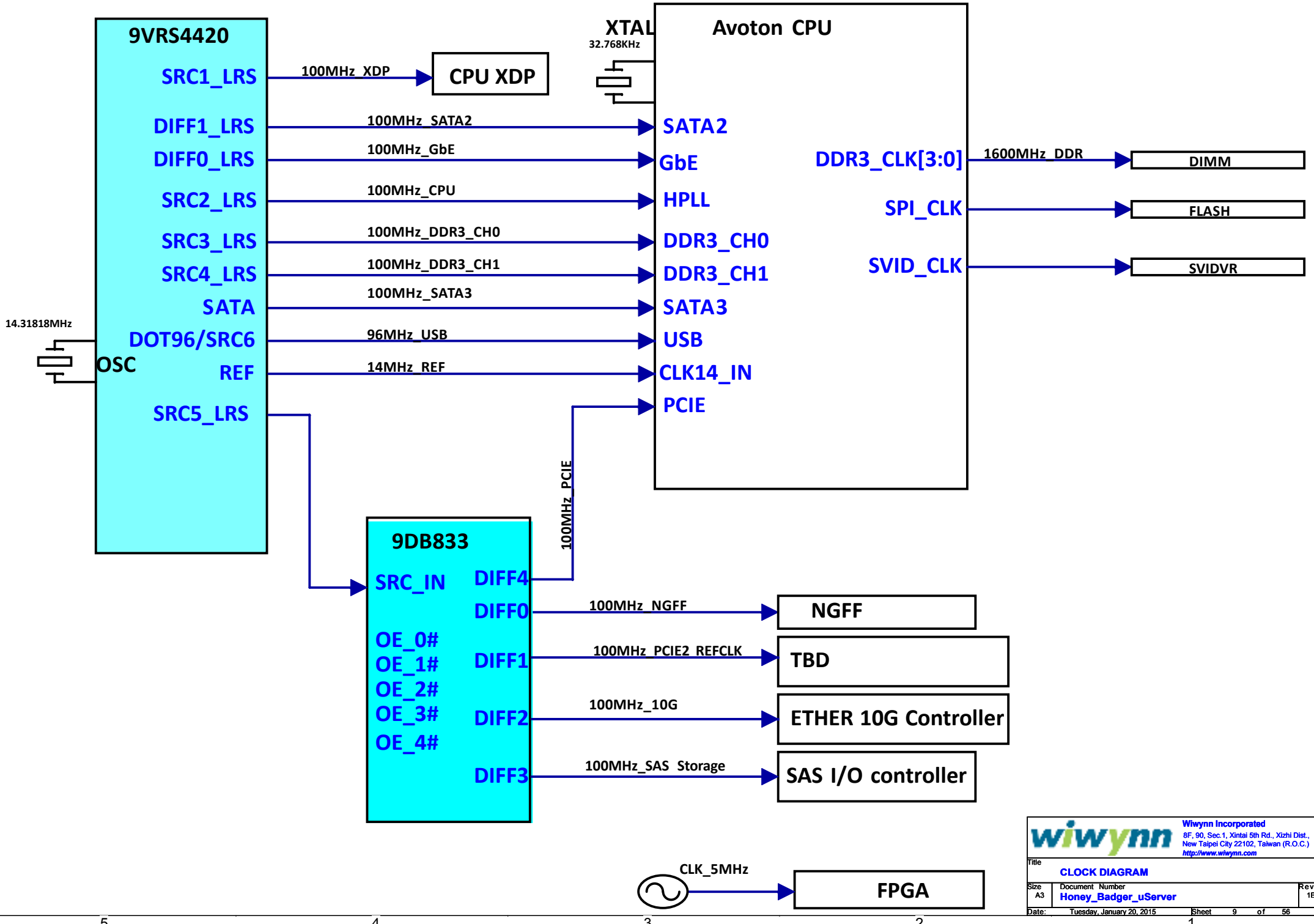

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BLANK

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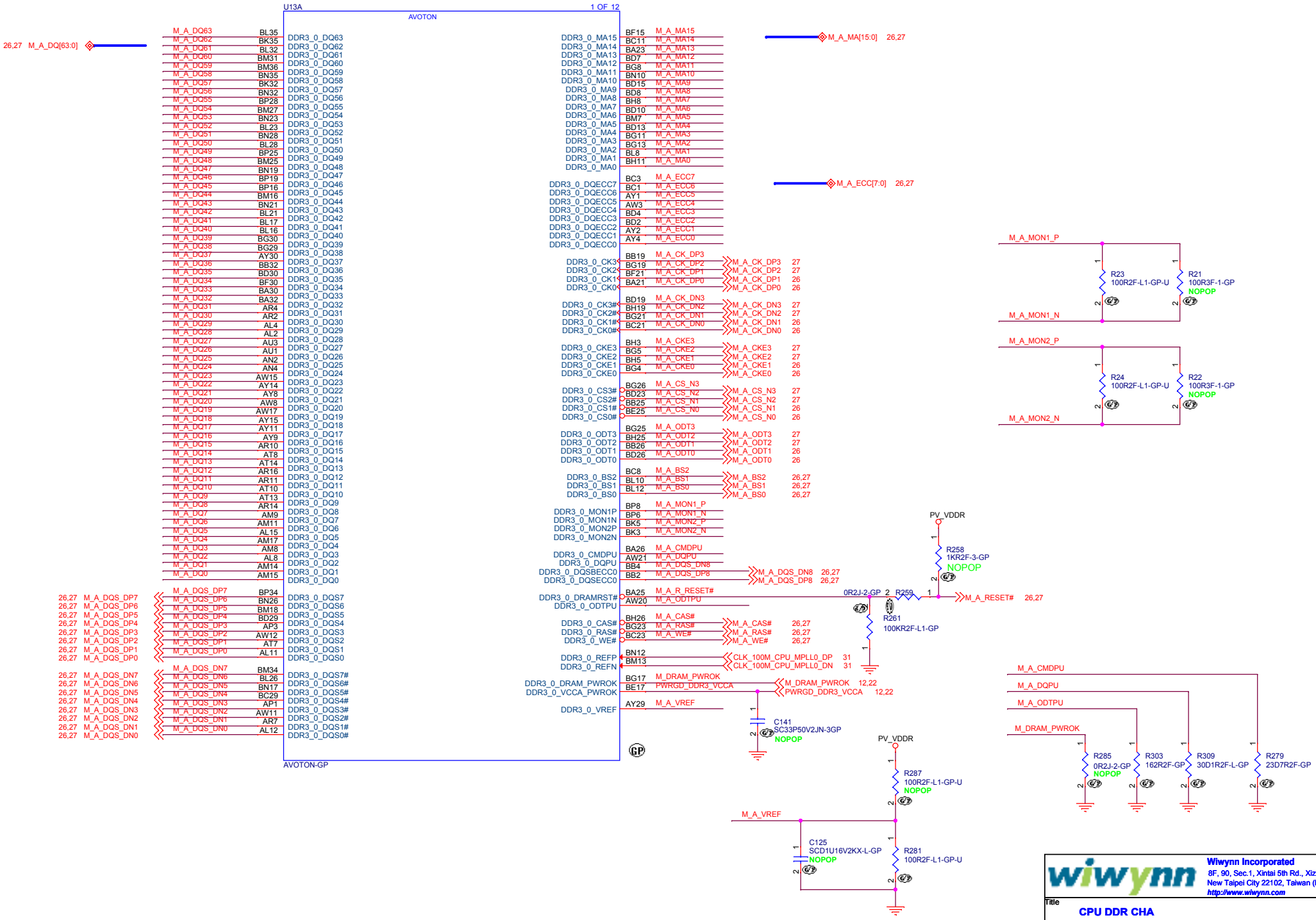
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M_A_DQ46 BP19 DDR3_0_DQ46
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M_A_DQ41 BL17 DDR3_0_DQ41
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M_A_DQ39 BG30 DDR3_0_DQ39
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M_A_MON1_P
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R21 100R3F-1-GP NOPOP
M_A_MON1_N
M_A_MON2_P
R24 100R2F-L1-GP-U
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M_A_MON2_N
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R258 1KR2F-3-GP NOPOP
0R2J-2-GP
R259
M_A_RESET# 26,27
R261 100KR2F-L1-GP
C141 SC33P50V2JN-3GP NOPOP
PV_VDDR
R287 100R2F-L1-GP-U NOPOP
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R281 100R2F-L1-GP-U
M_A_CMDPU
M_A_DQPU
M_A_ODTPU
M_DRAM_PWROK
R285 0R2J-2-GP NOPOP
R303 162R2F-GP
R309 30D1R2F-L-GP
R279 23D7R2F-GP
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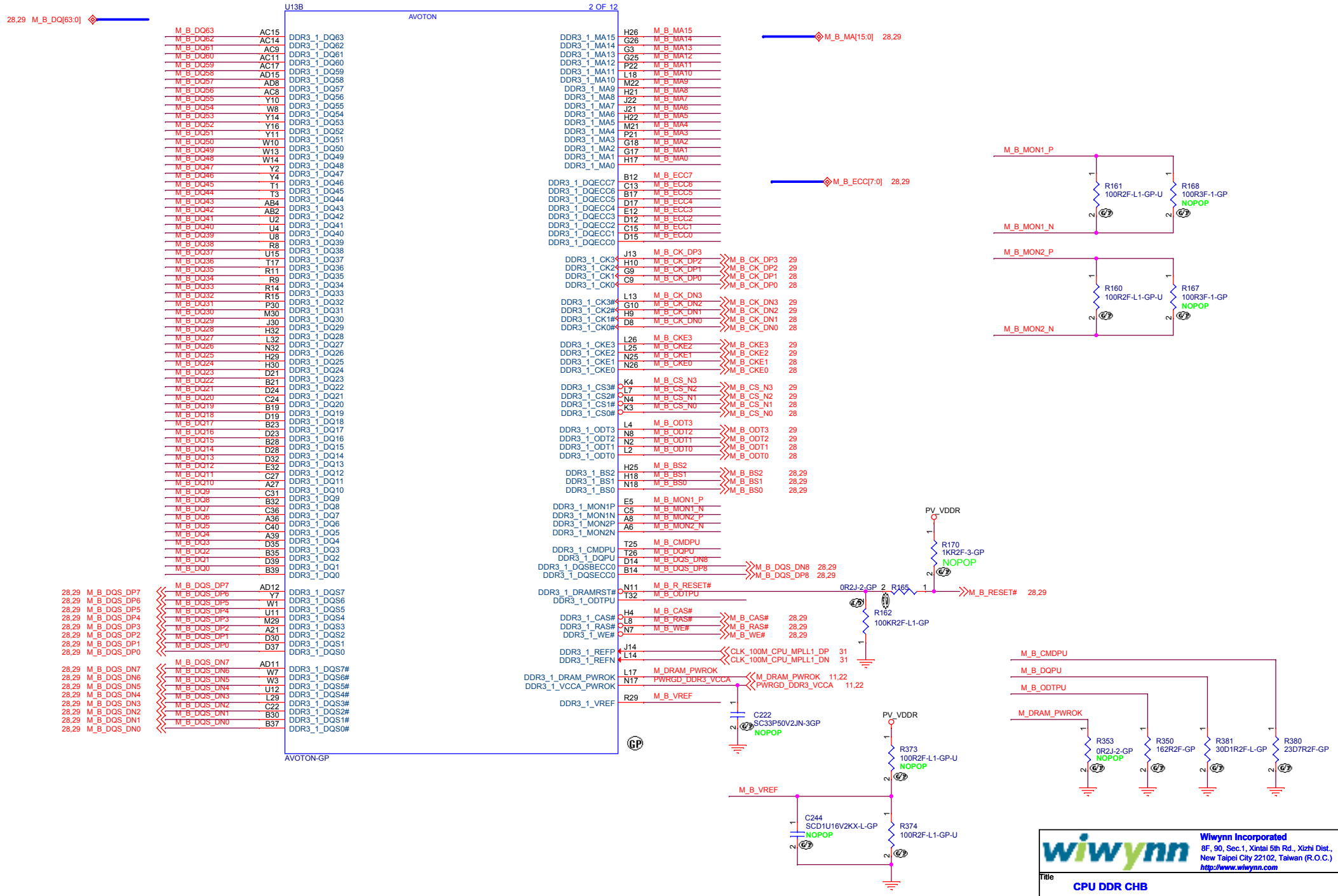
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AVOTON-GP
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M_B_ECC[7:0] 28,29
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M_B_MON2_P
M_B_MON2_N
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R168 100R3F-1-GP NOPOP
R160 100R2F-L1-GP-U
R167 100R3F-1-GP NOPOP
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R170 1KR2F-3-GP NOPOP
0R2J-2-GP R165
M_B_RESET# 28,29
R162 100KR2F-L1-GP
C222 SC33P50V2JN-3GP NOPOP
M_B_CMDPU
M_B_DQPU
M_B_ODTPU
M_DRAM_PWROK
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R350 162R2F-GP
R381 30D1R2F-L-GP
R380 23D7R2F-GP
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C244 SCD1U16V2KX-L-GP NOPOP
R373 100R2F-L1-GP-U NOPOP
R374 100R2F-L1-GP-U
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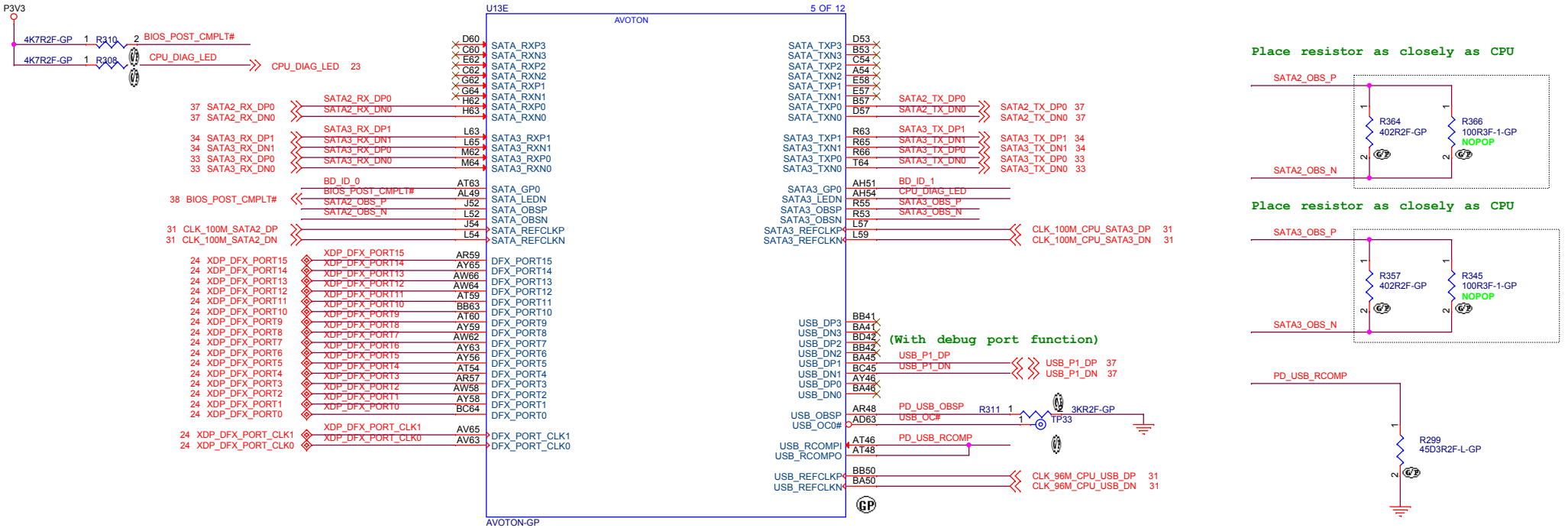

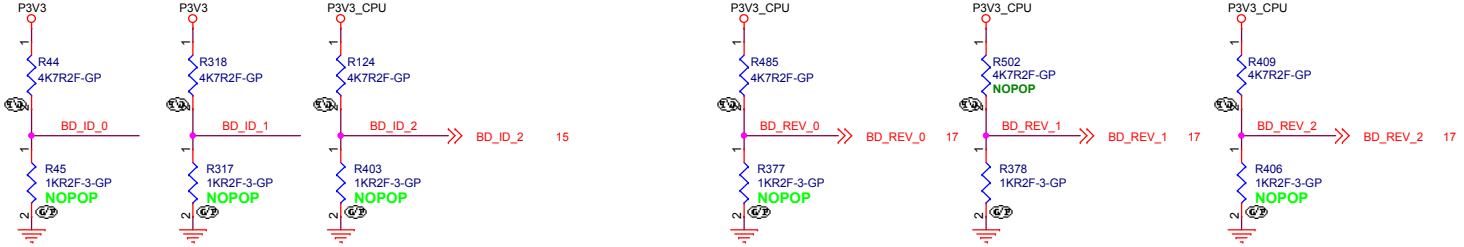

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Title: CPU SATA/USB/DFX/BOARD REV

Size	Document Number	Rev
A3	Honey_Badger_uServer	1B

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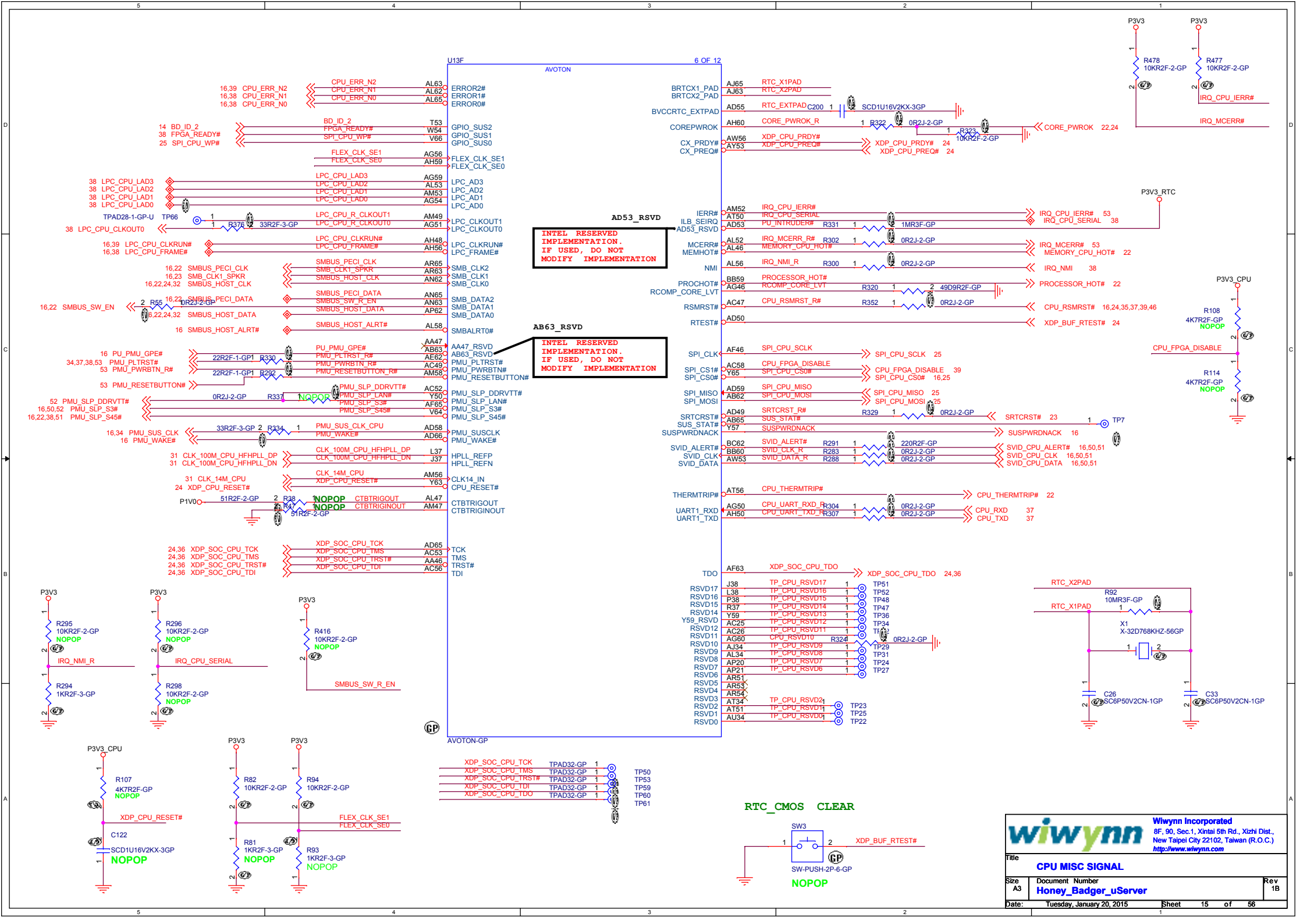
U13F
6 OF 12
AVOTON
AVOTON-GP
INTEL RESERVED IMPLEMENTATION. IF USED, DO NOT MODIFY IMPLEMENTATION
AD53_RSVD
AB63_RSVD
RTC_CMOS CLEAR
SW-PUSH-2P-6-GP
NOPOP
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http://www.wiwynn.com
CPU MISC SIGNAL
Honey_Badger_uServer
Size A3
Rev 1B
Date: Tuesday, January 20, 2015
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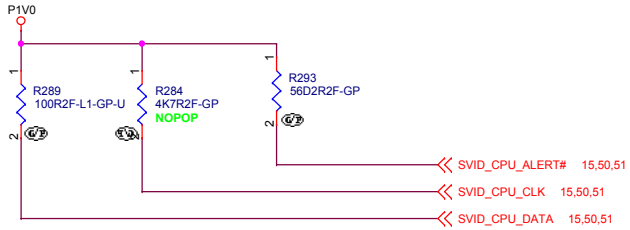

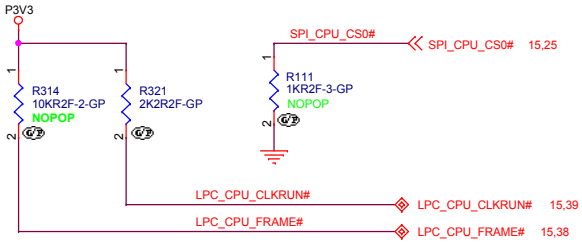

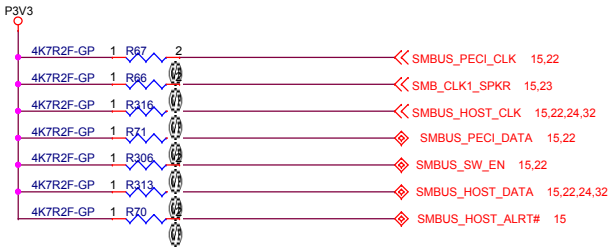

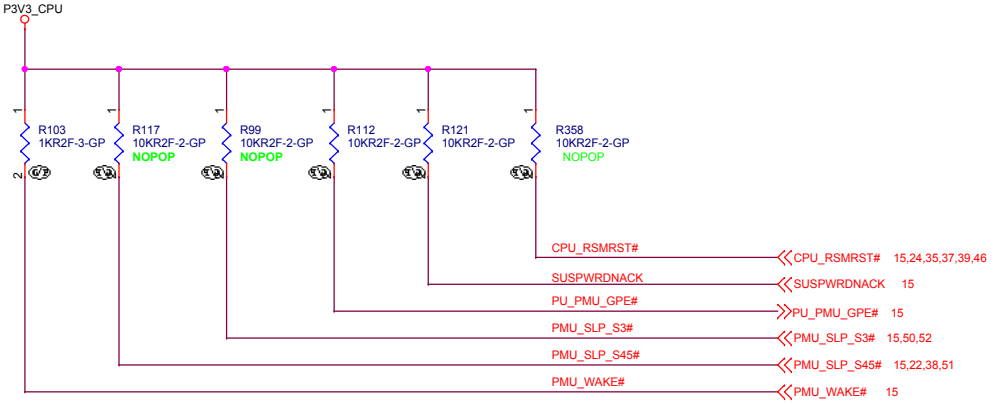

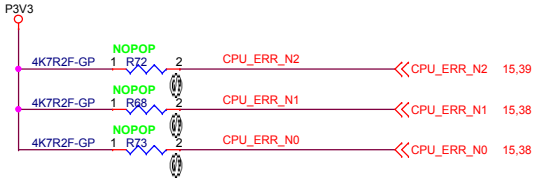

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Title: CPU SMB/LPC/SVID PULL-UP

Size	Document Number	Rev
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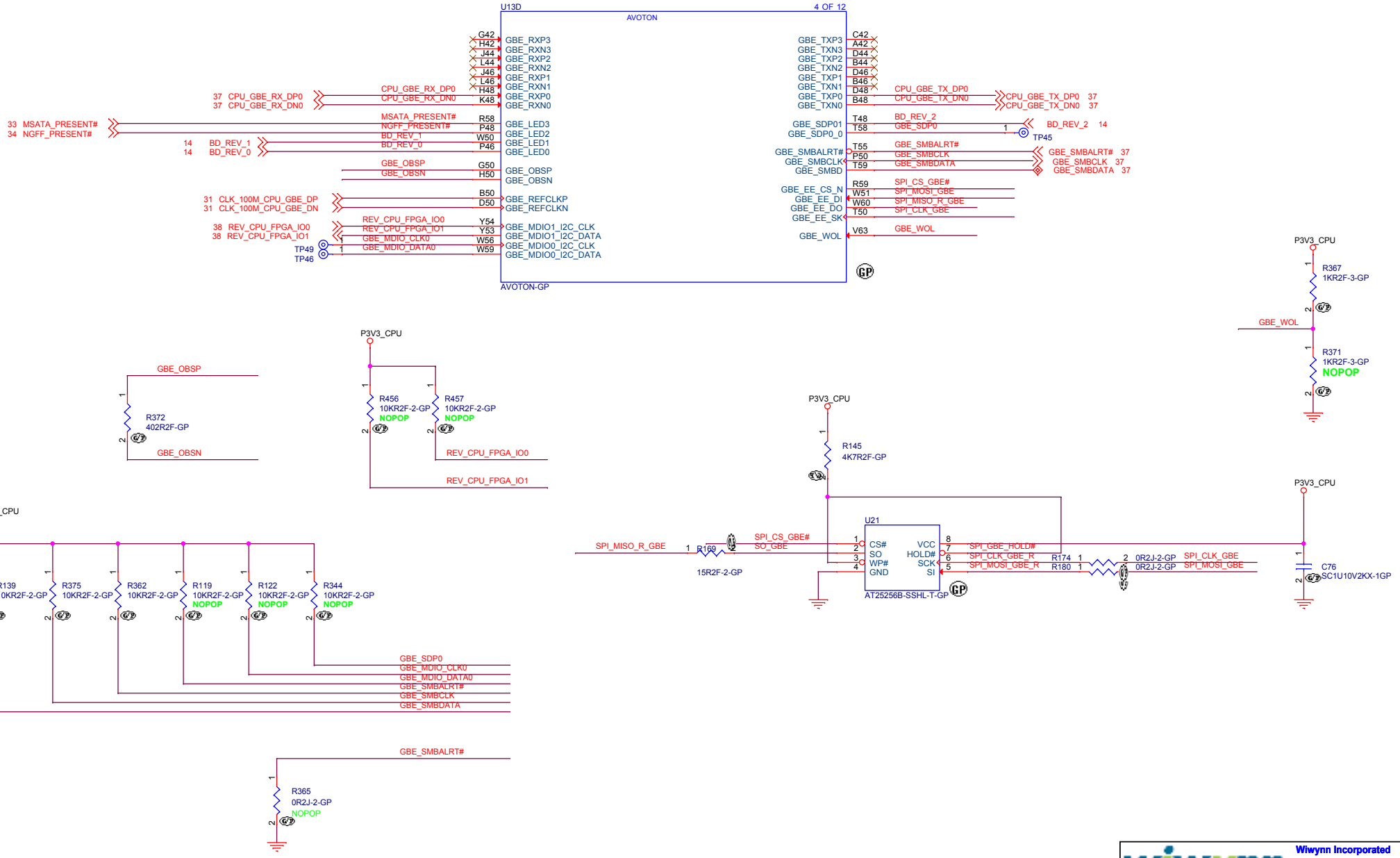

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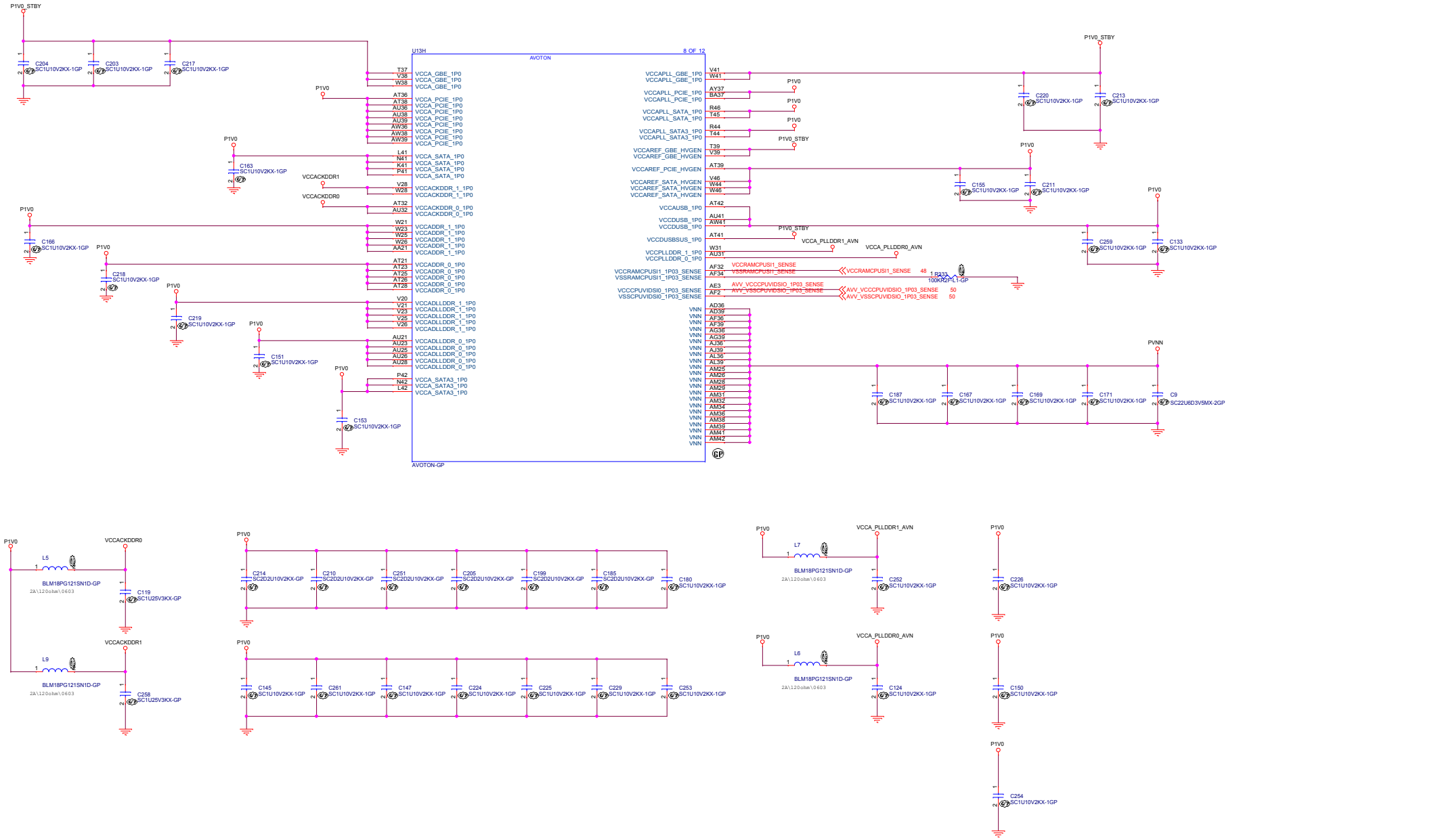
http://www.wiwynn.com		
Title: CPU GB LAN		
Size: A3	Document Number: Honey_Badger_uServer	Rev: 1B
Date: Tuesday, January 20, 2015	Sheet 17 of 56	



Company	Wiwynn Incorporated
Address	8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.)
Website	http://www.wiwynn.com
Title	CPU POWER1/2
Size	A2
Document Number	Honey_Badger_uServer
Rev	1B
Date	Tuesday, January 20, 2015
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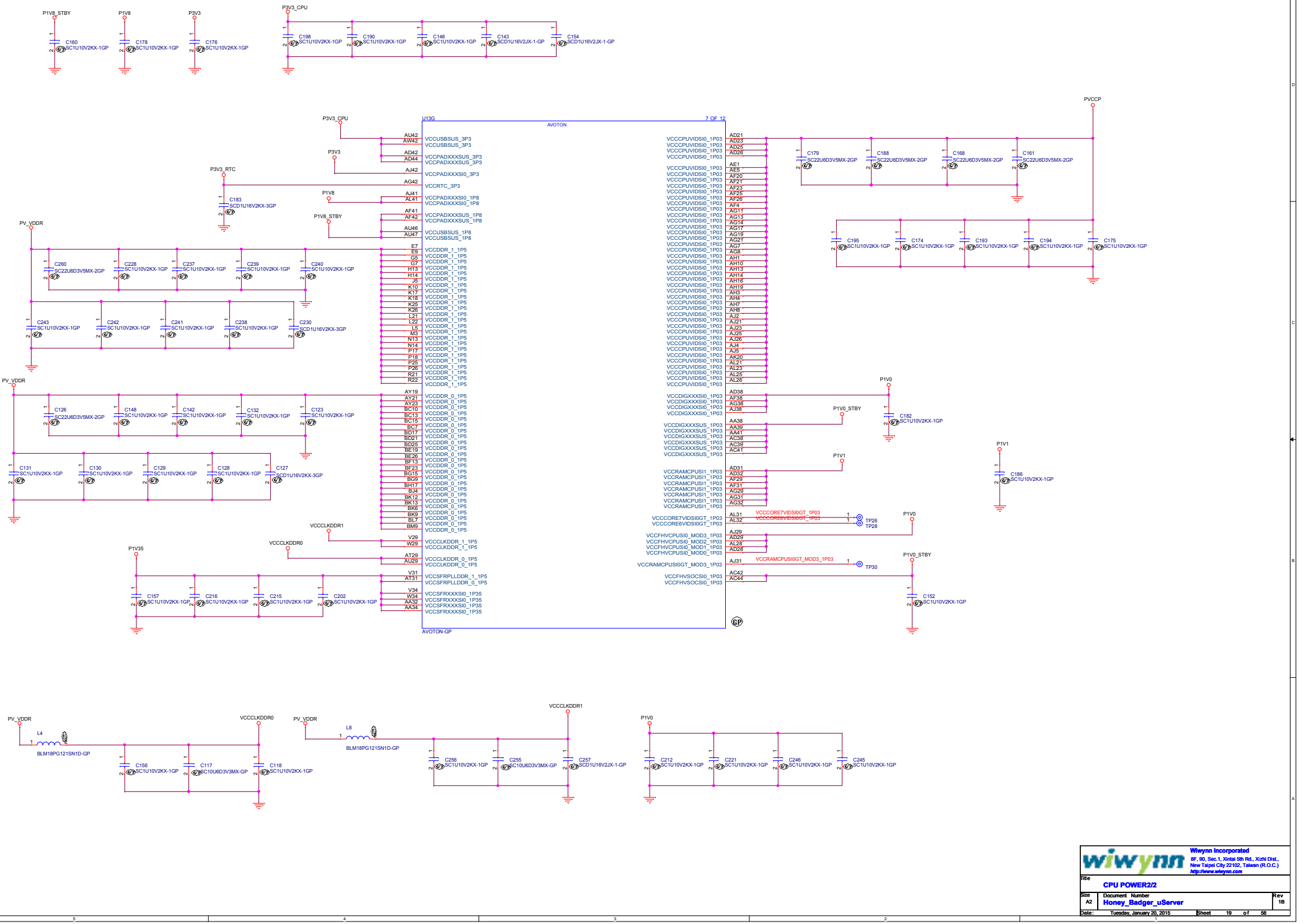

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http://www.wiwynn.com		
Title	CPU POWER2/2	
Size: A2	Document Number: Honey_Badger_uServer	Rev: 1B
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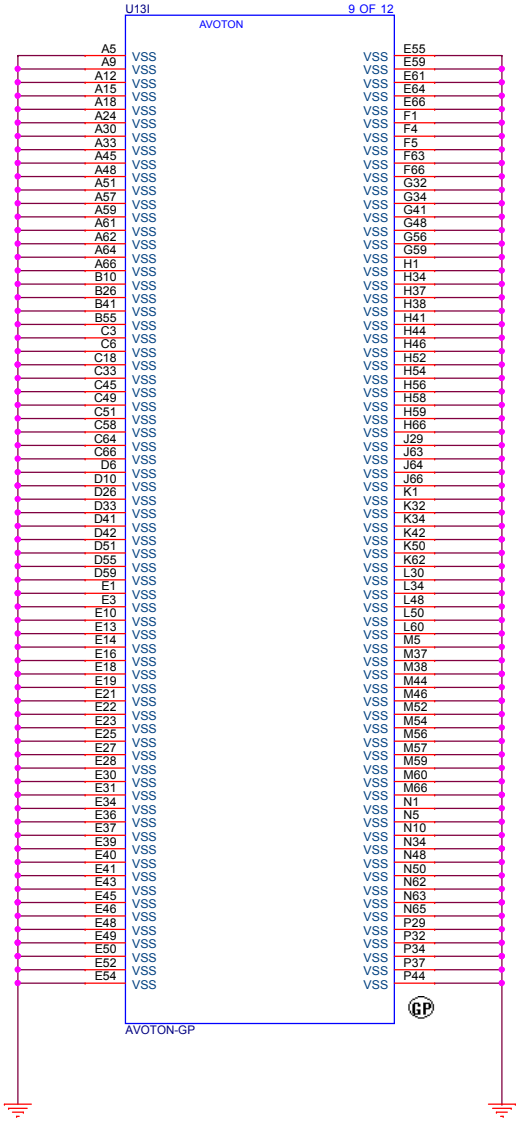

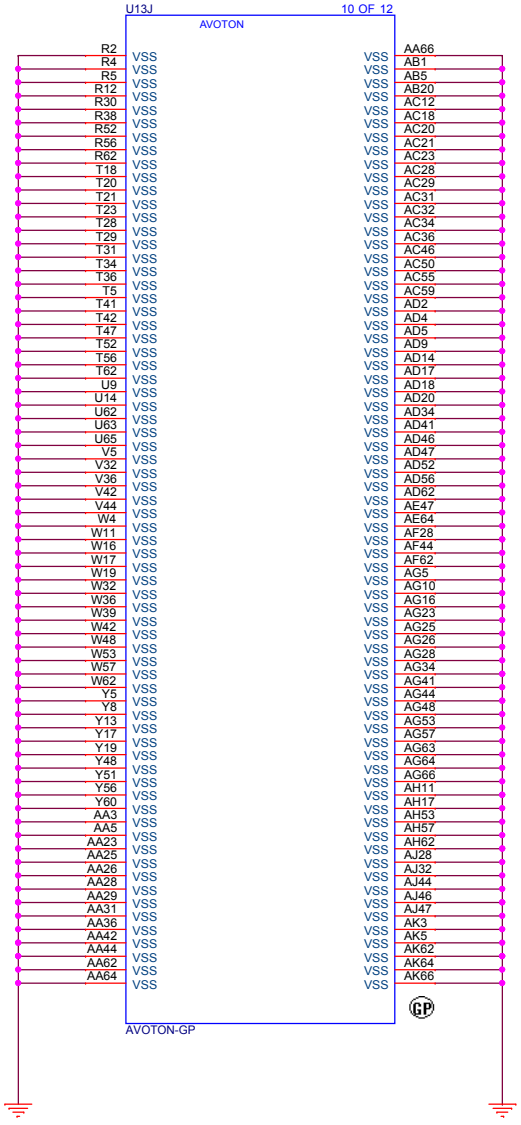

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New Taipei City 22102, Taiwan (R.O.C.)
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Title: CPU GND 1/2

Size: A3 | Document Number: Honey_Badger_uServer | Rev: 1B

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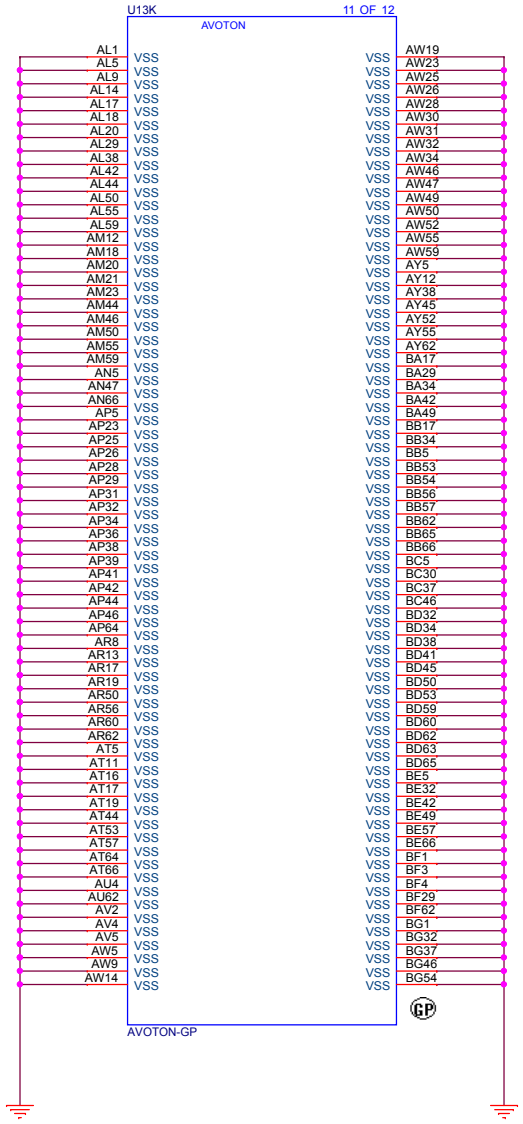

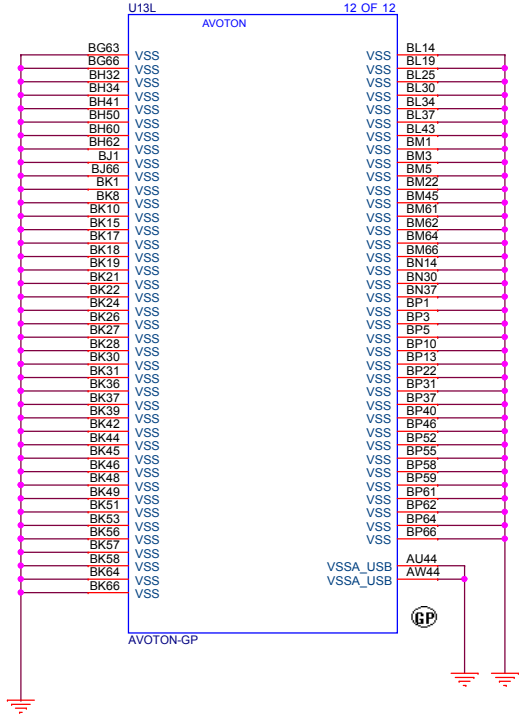

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Title: CPU GND 2/2

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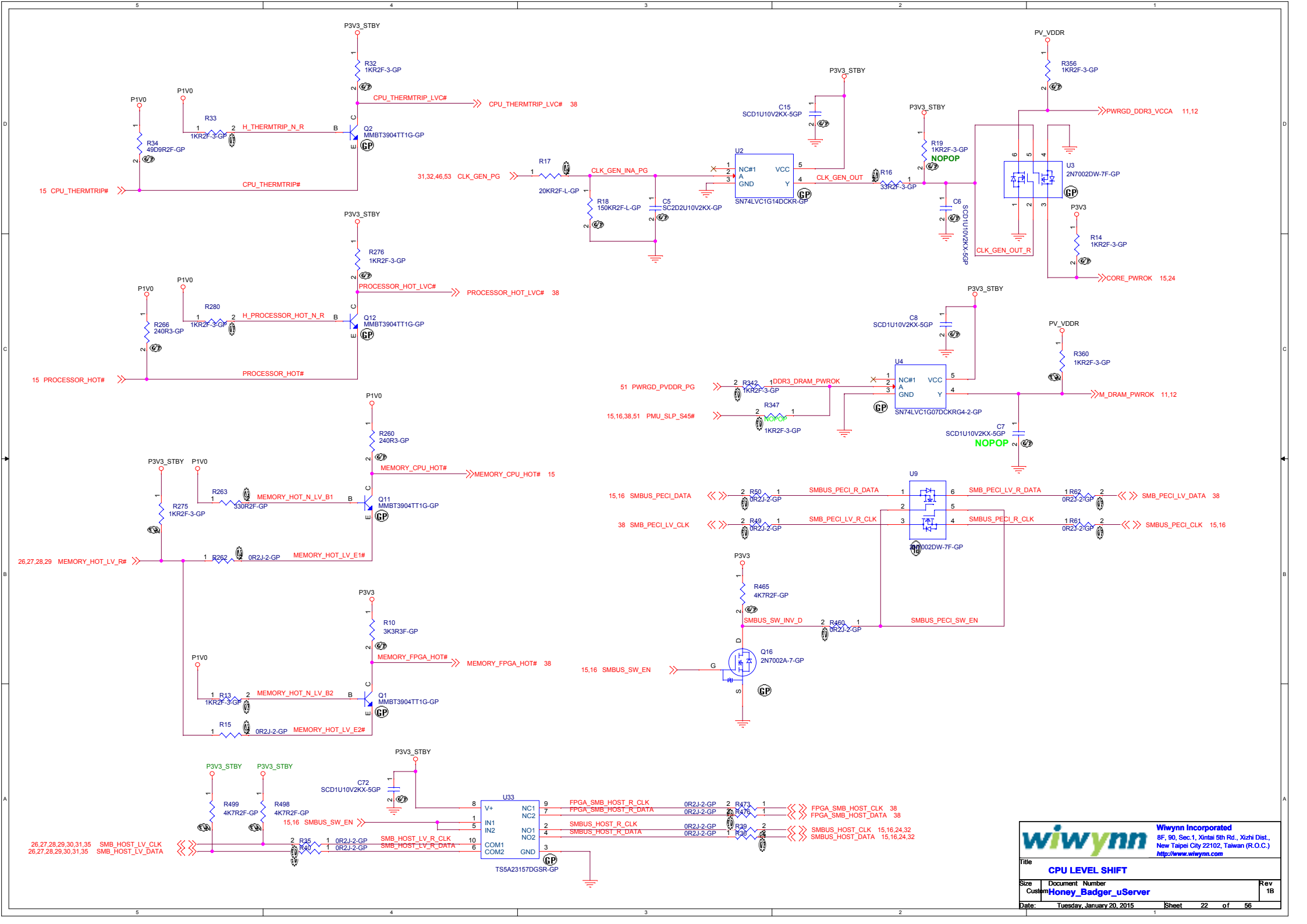

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Title	CPU LEVEL SHIFT
Size: Custom	Document Number: Honey_Badger_uServer
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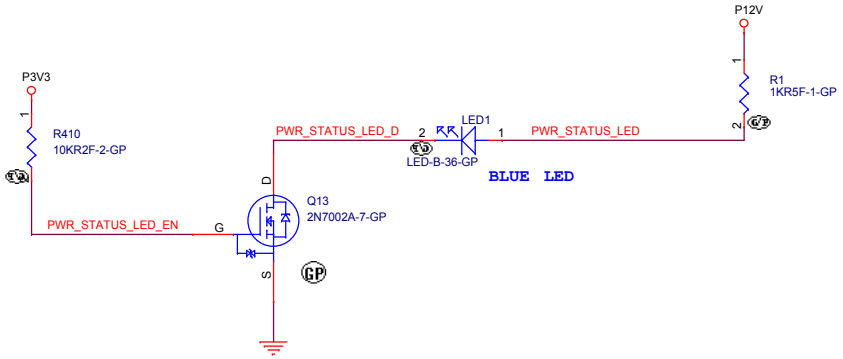
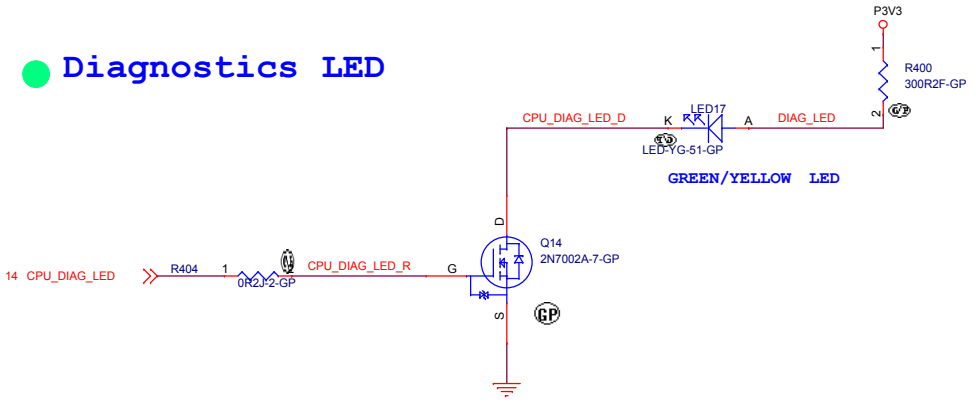
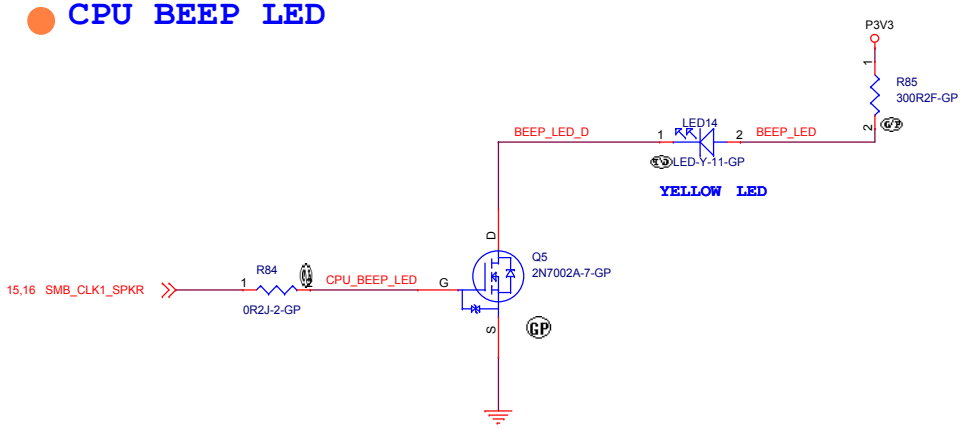
Power Status LED



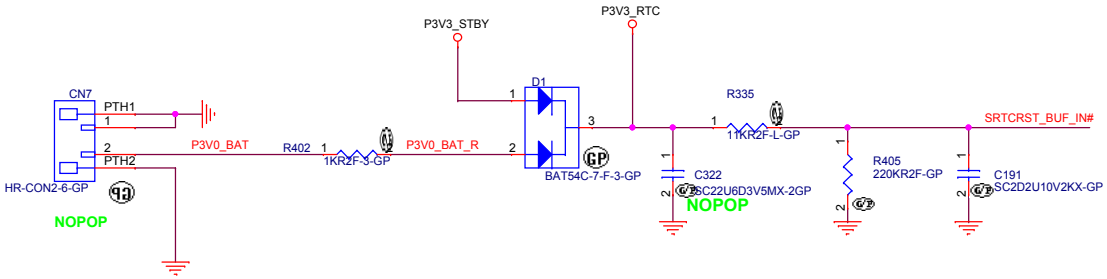
Diagnostics LED

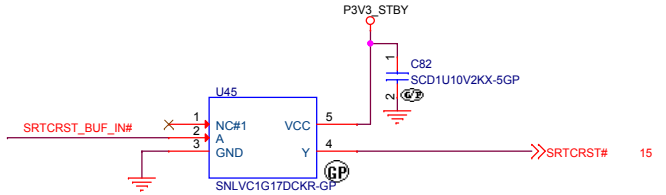


CPU BEEP LED

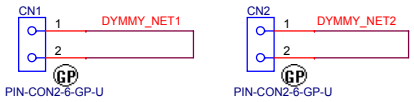


RTC BATTERY CIRCUIT





Heatsink holder



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Title: 023 CPU INDICATOR LED		
Size: A3	Document Number: Honey_Badger_uServer	Rev: 1B
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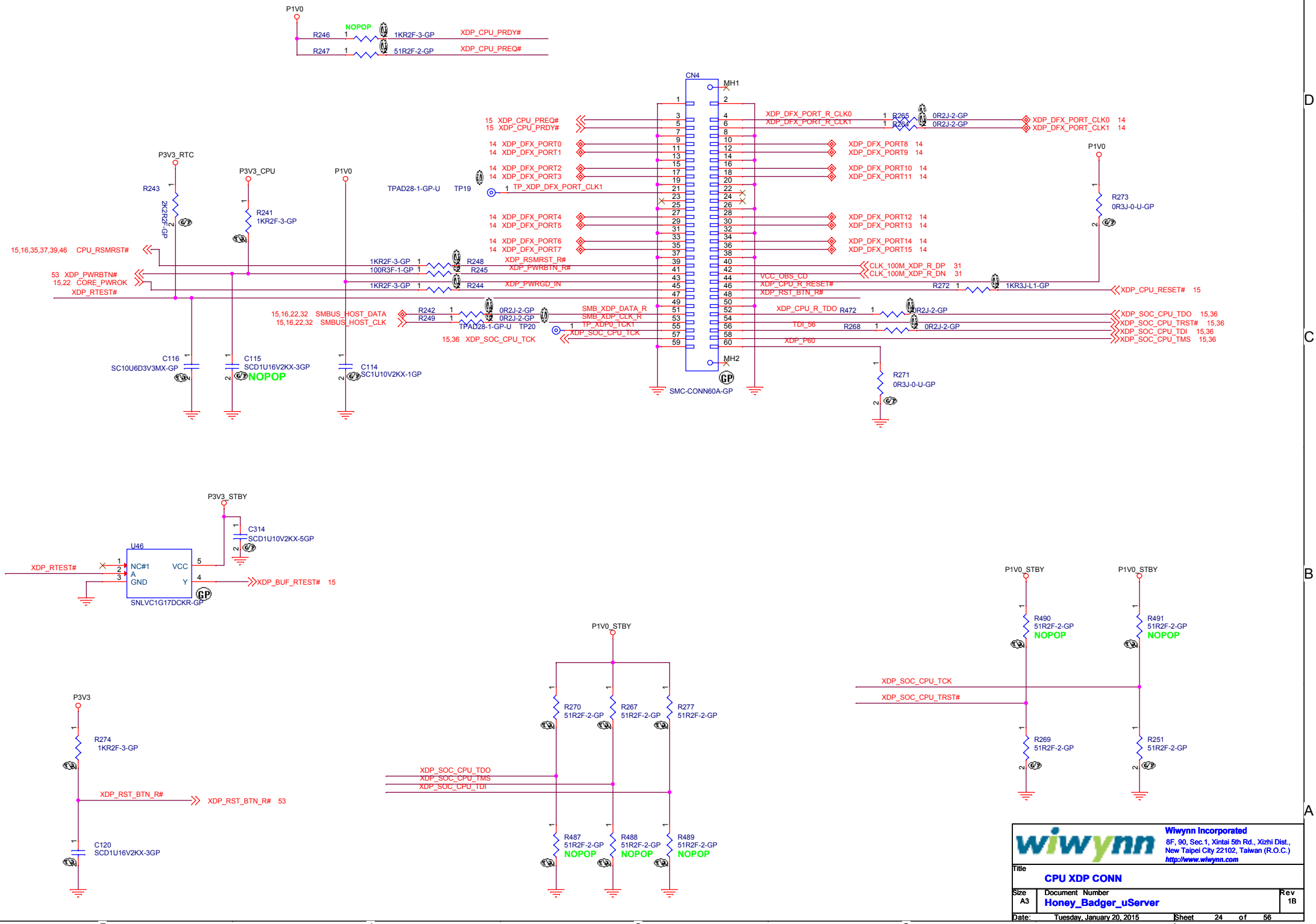

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http://www.wiwynn.com		
Title	CPU XDP CONN	
Size A3	Document Number Honey_Badger_uServer	Rev 1B
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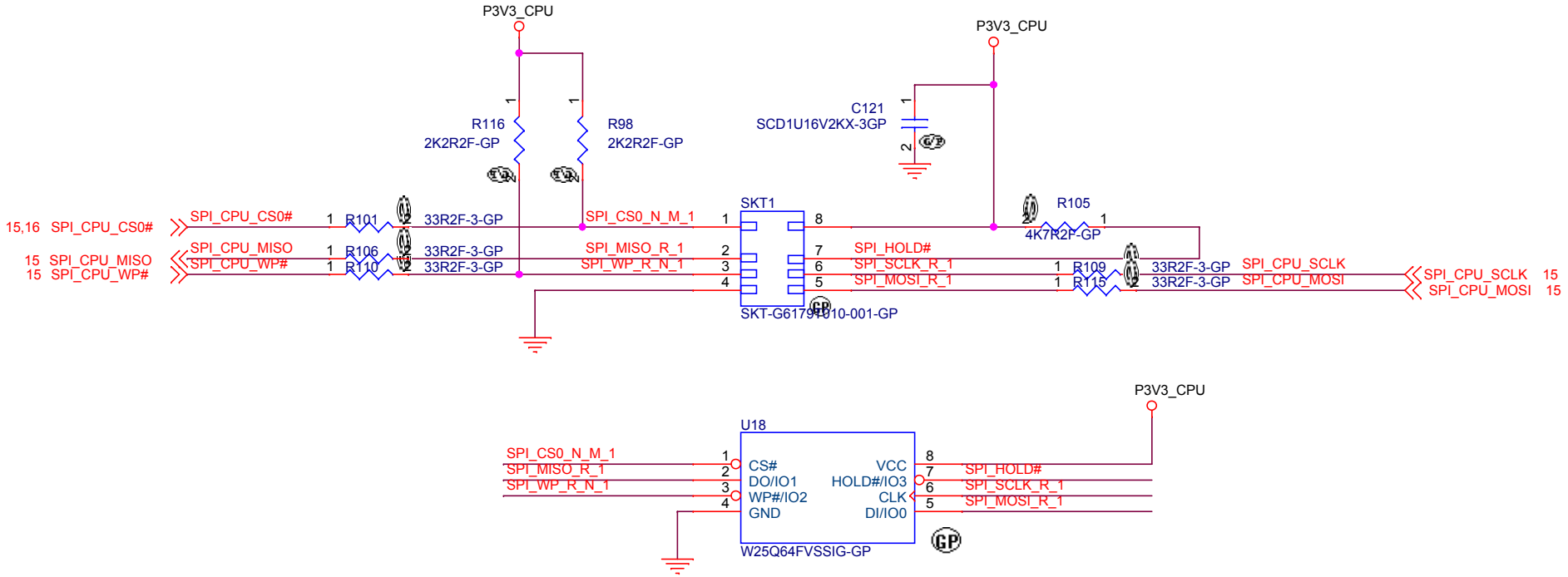
SPI ROM CIRCUIT



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Title: SPI REMOTE FLASH		
Size: A4	Document Number: Honey_Badger_uServer	Rev: 1B
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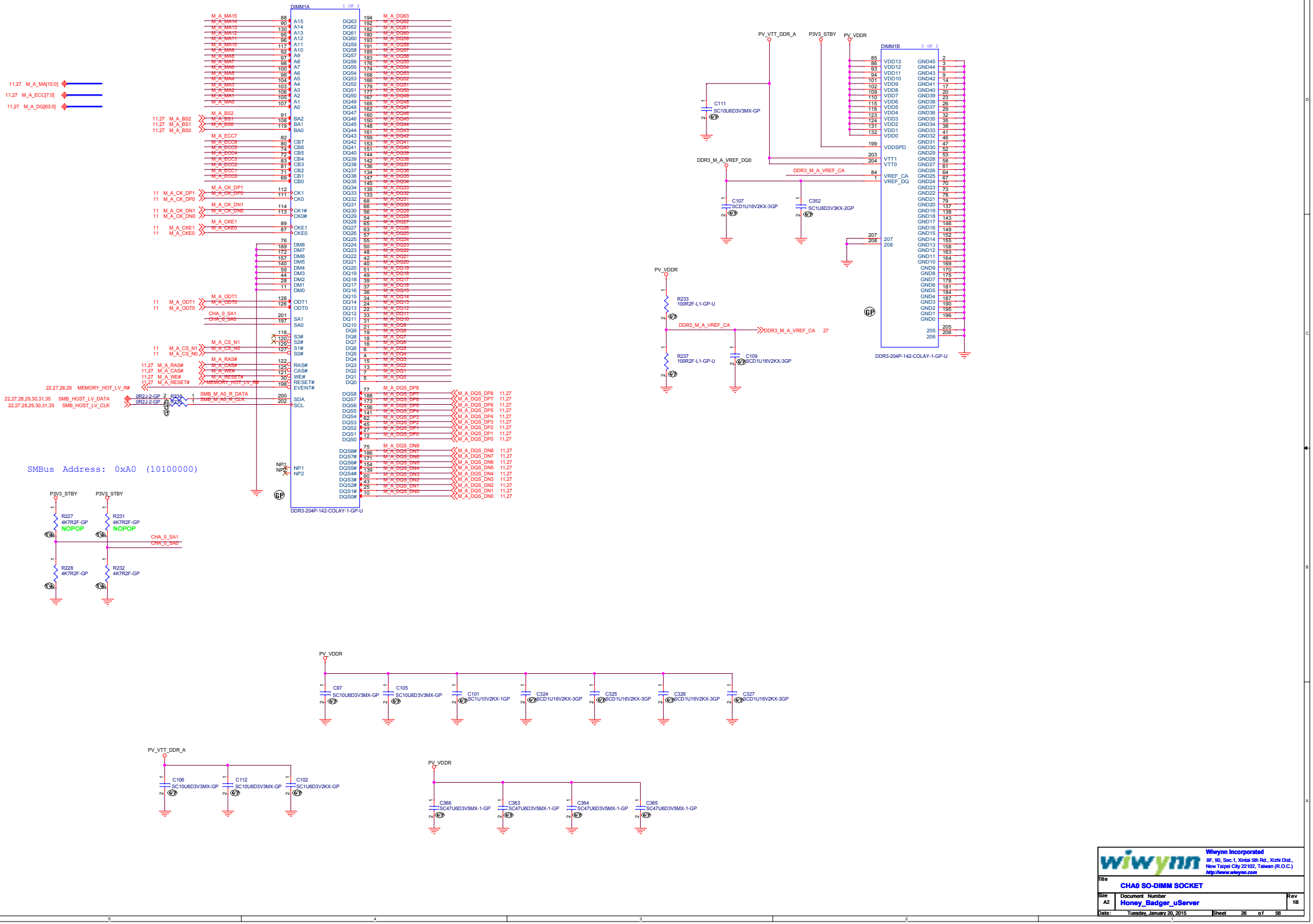
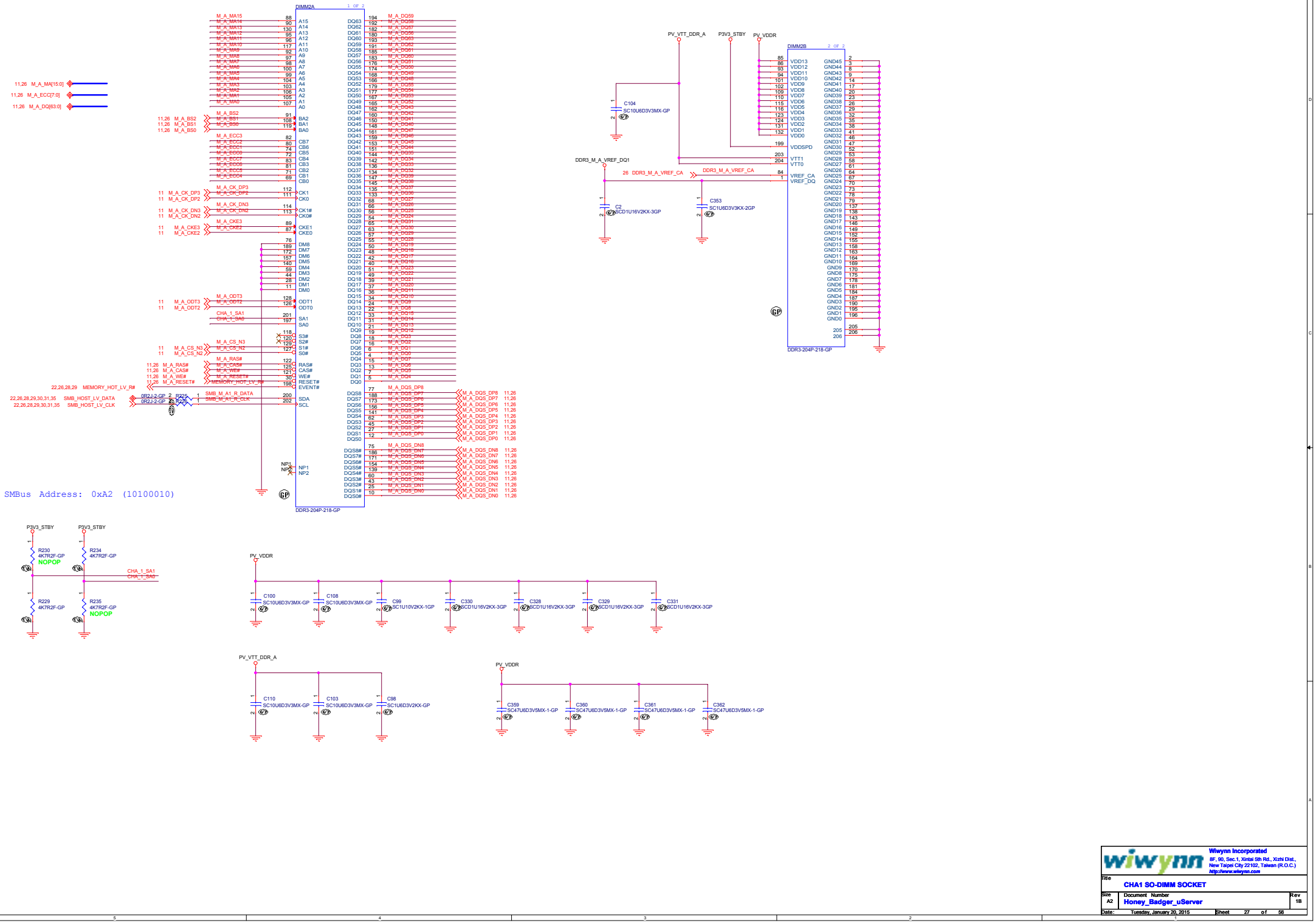


Wiwynn Incorporated	8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.) http://www.wiwynn.com
Title	CHA0 SO-DIMM SOCKET
Size A2	Document Number: Honey_Badger_uServer
Rev	1B
Date: Tuesday, January 20, 2015	Sheet 26 of 56



Wiwynn Incorporated	8F, 60, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.) http://www.wiwynn.com
Title	CHA1 SO-DIMM SOCKET
Size: A2	Document Number: Honey_Badger_uServer
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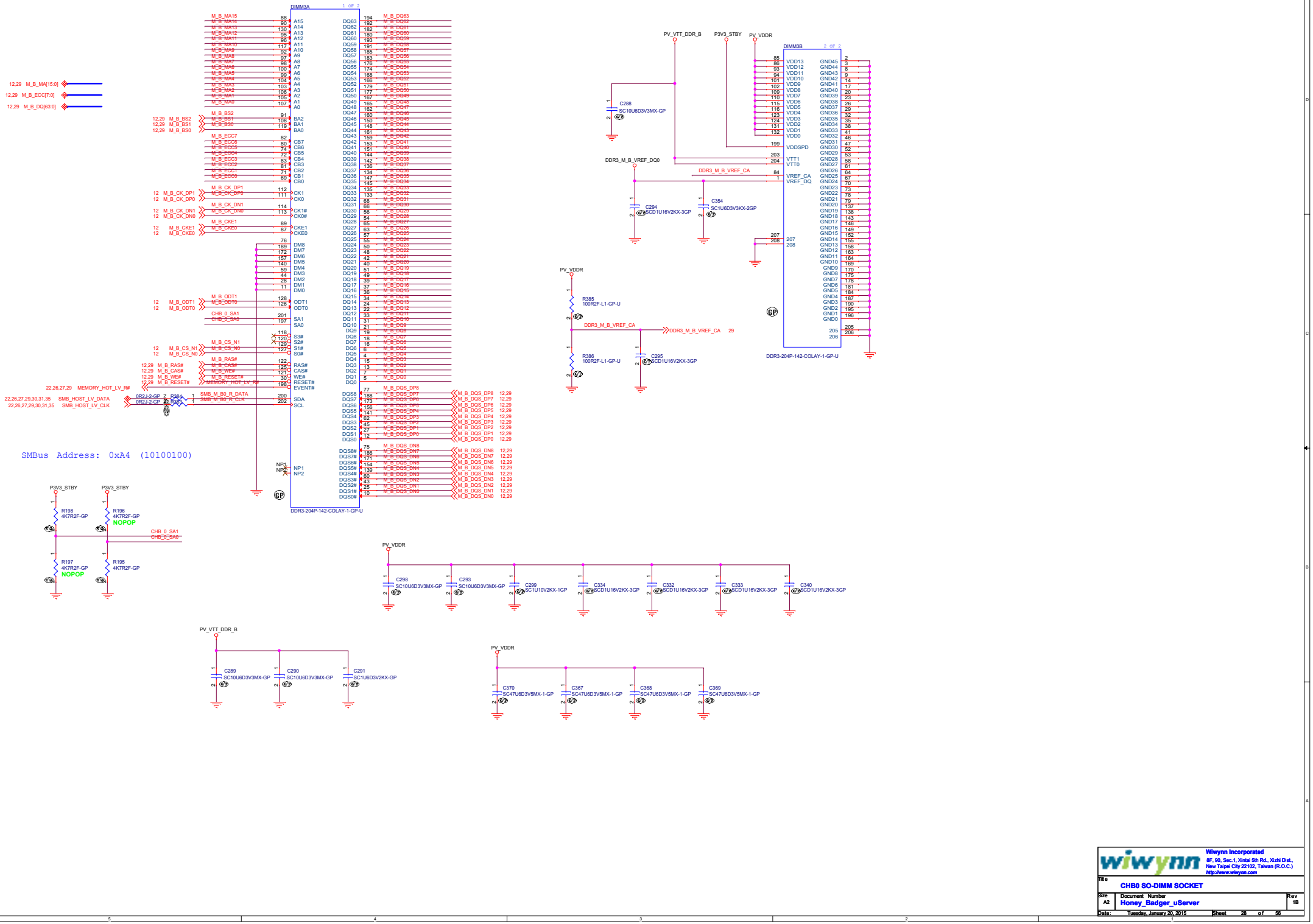

Wiwynn Incorporated	8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.) http://www.wiwynn.com
Title	CHB0 SO-DIMM SOCKET
Size A2	Document Number: Honey_Badger_uServer
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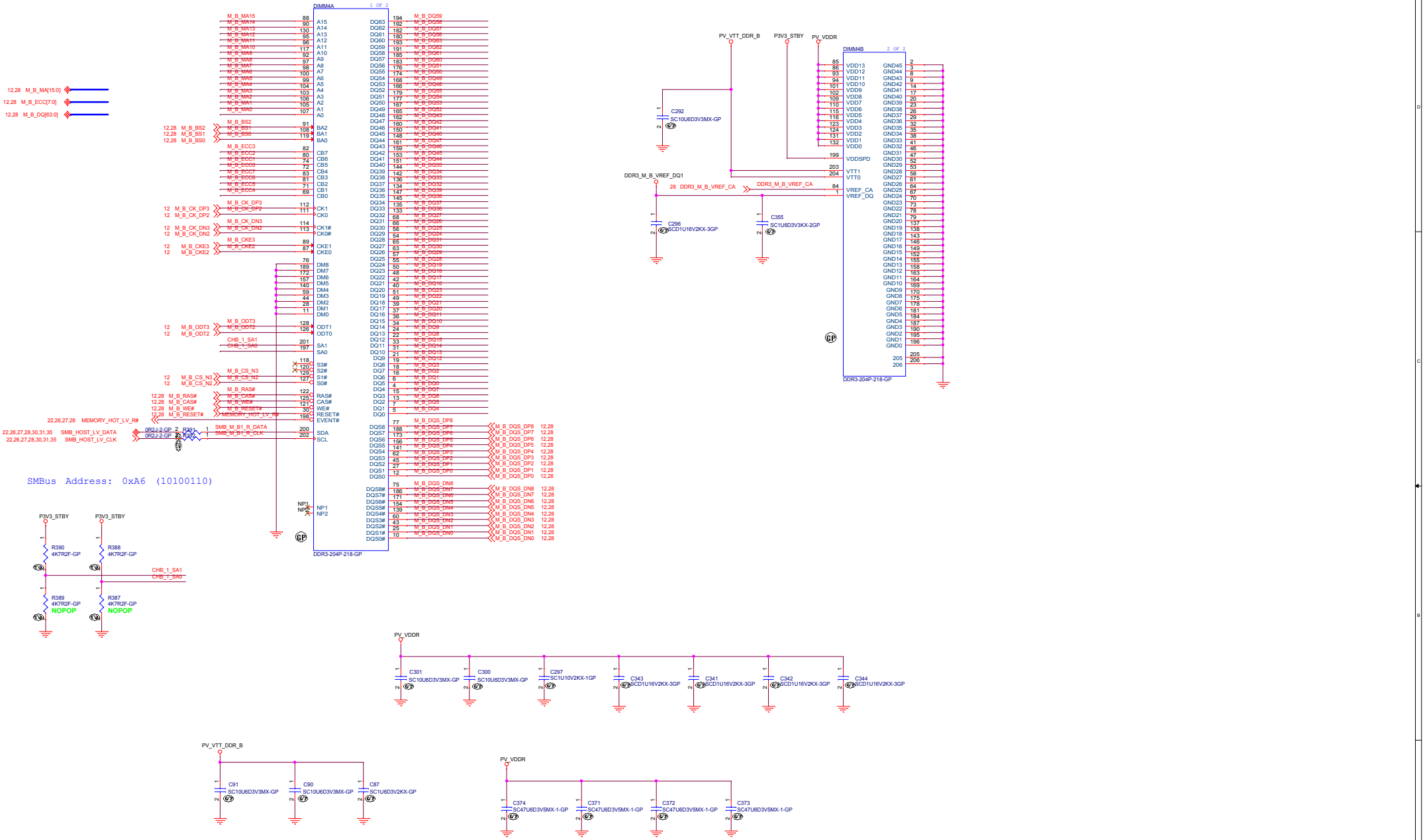

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Title	CHB1 SO-DIMM SOCKET
Size	A2
Document Number	Honey_Badger_uServer
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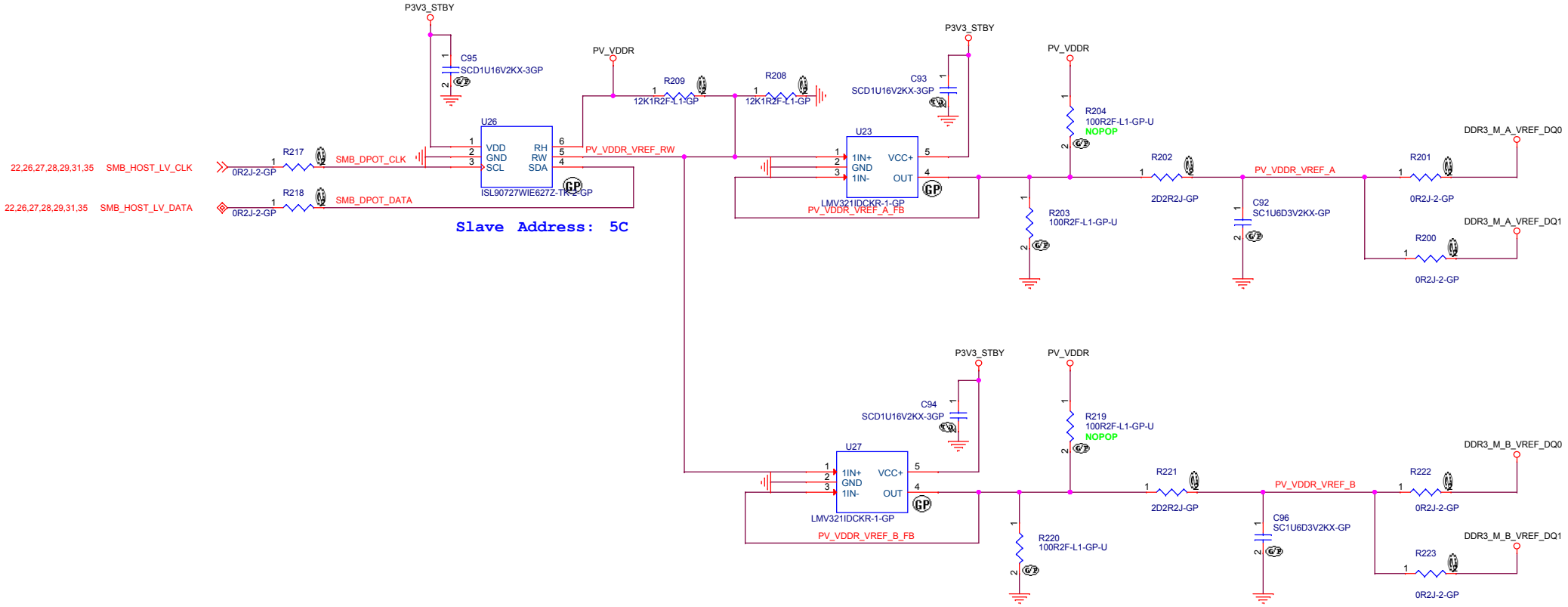

Wiwynn Incorporated 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.) http://www.wiwynn.com		
Title: DIMM VREF		
Size: A3	Document Number: Honey_Badger_uServer	Rev: 1B
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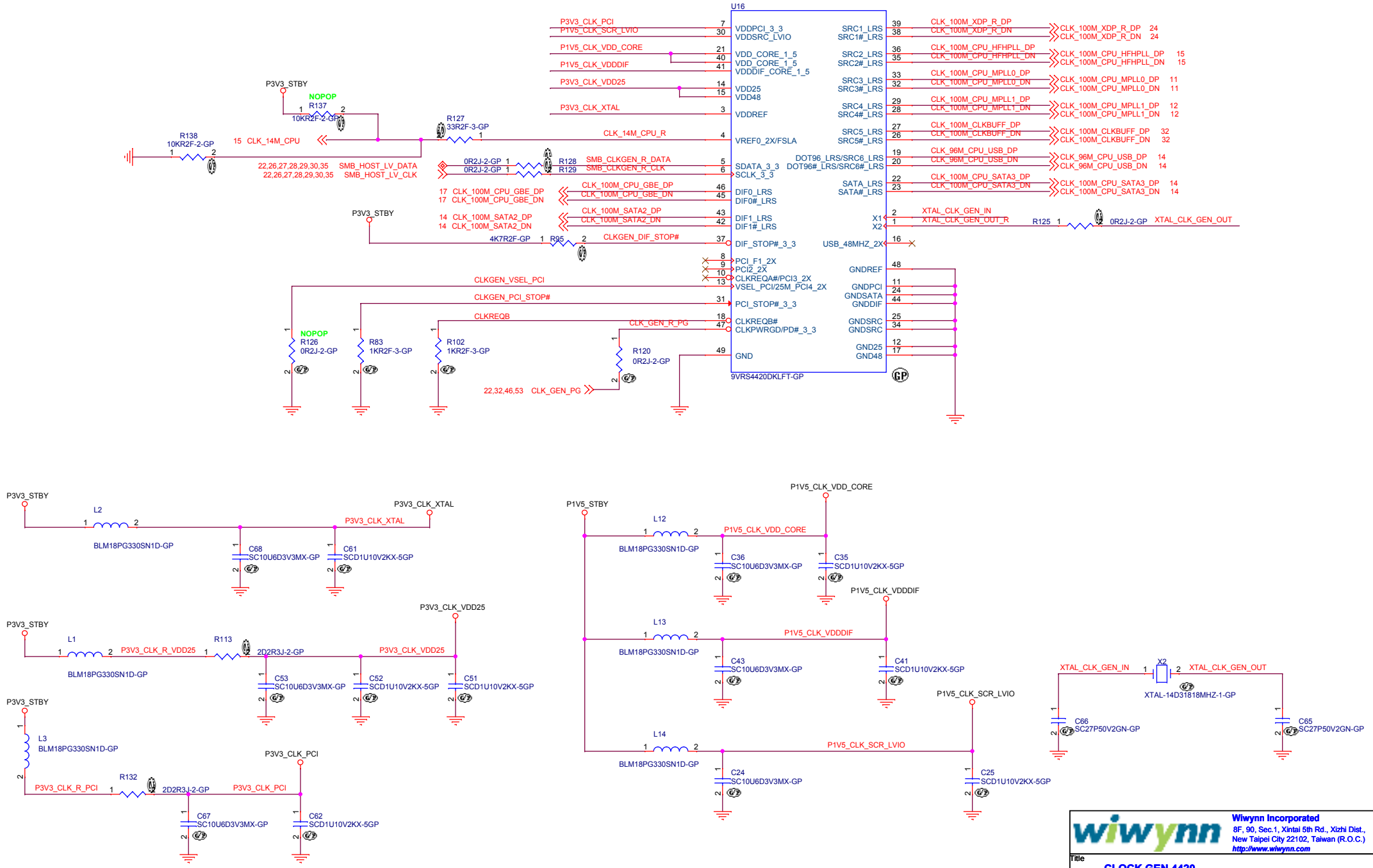

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Title: CLOCK GEN 4420

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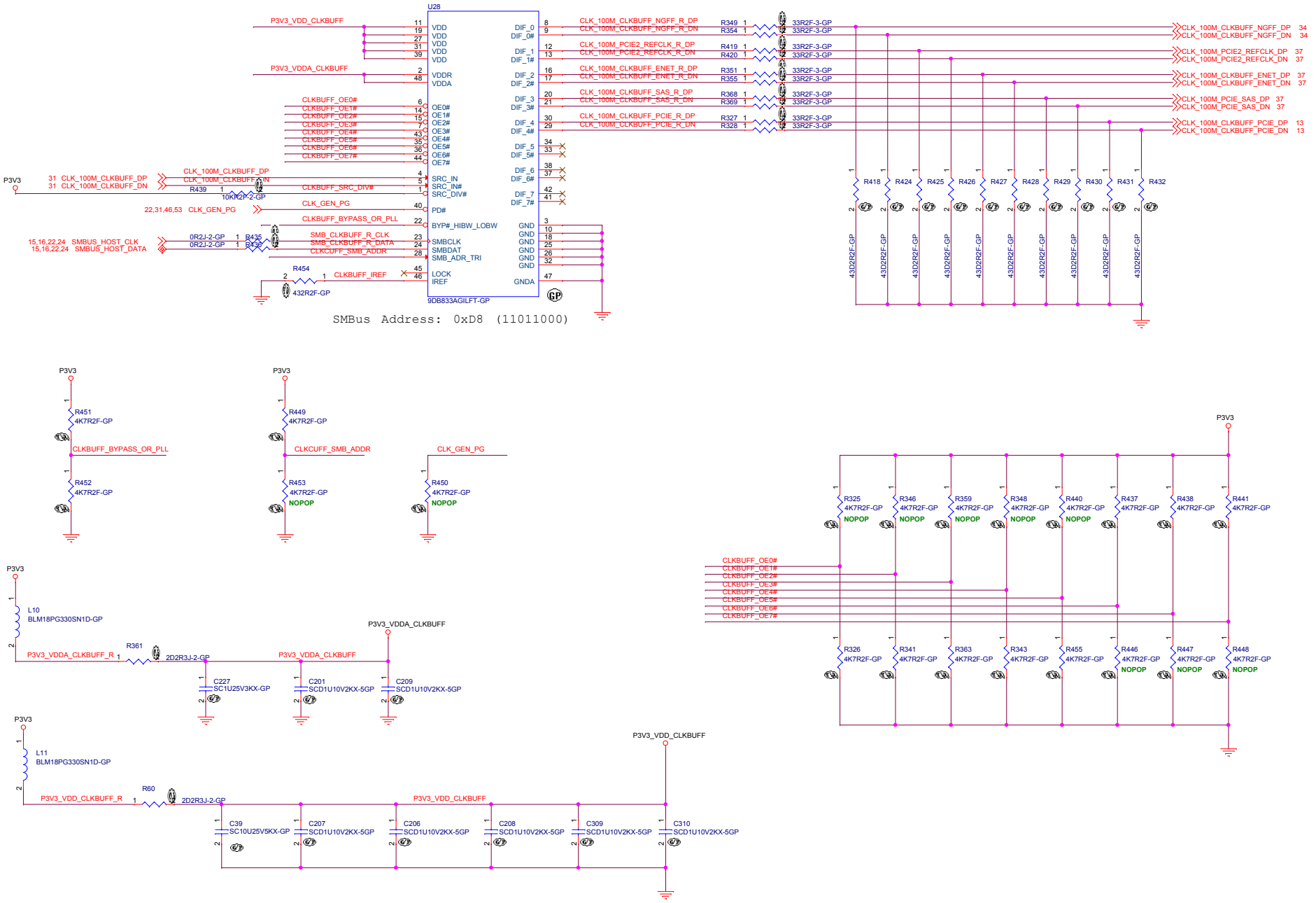

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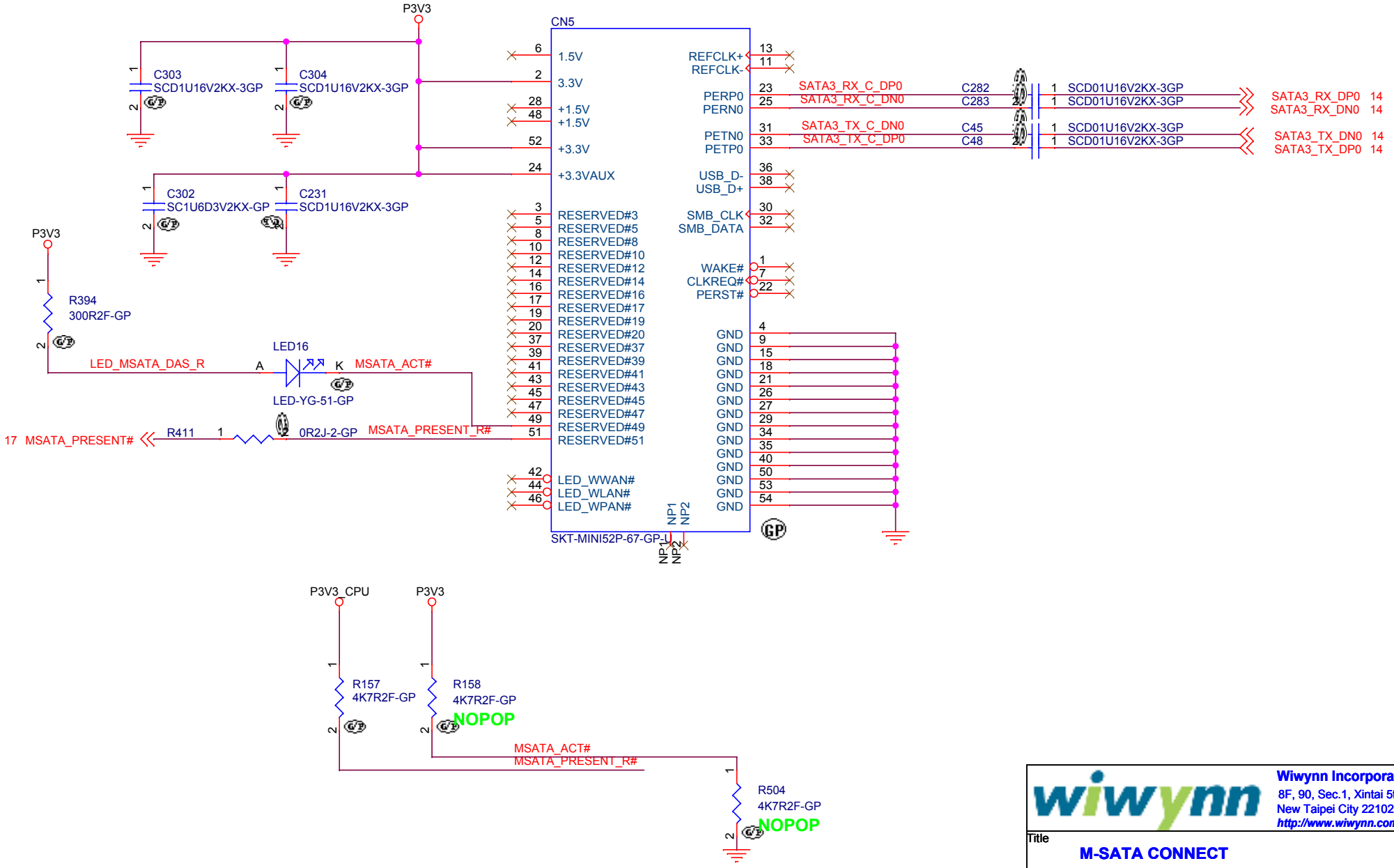
8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.)			
http://www.wiwynn.com			
Title: CLOCK BUFFER			
Size: Custom	Document Number: Honey_Badger_uServer		Rev: 1B
Date: Tuesday, January 20, 2015	Sheet 32 of 56		



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Title: **M-SATA CONNECT**

Size	Document Number	Rev
A4	Honey_Badger_uServer	1B

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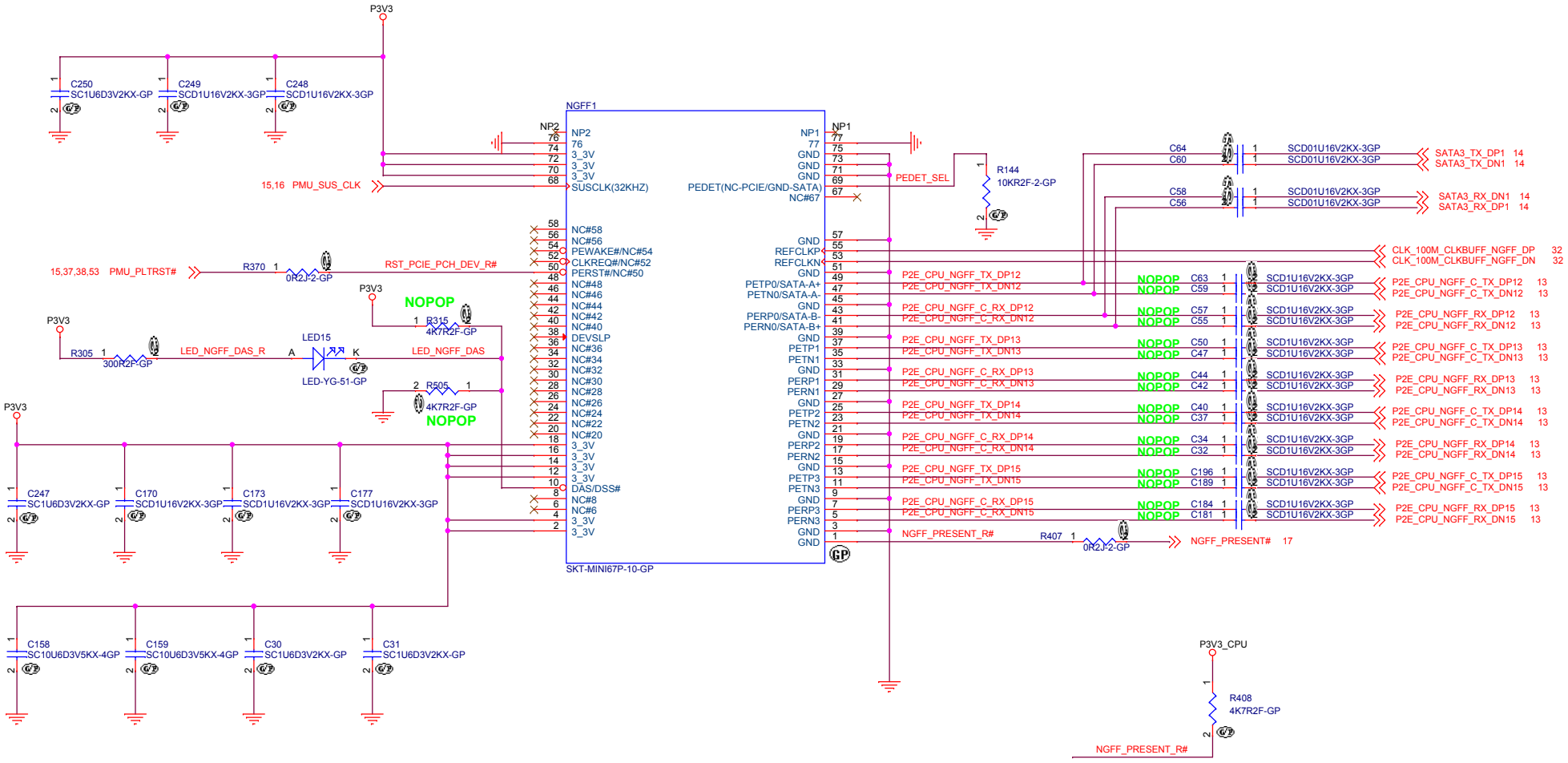
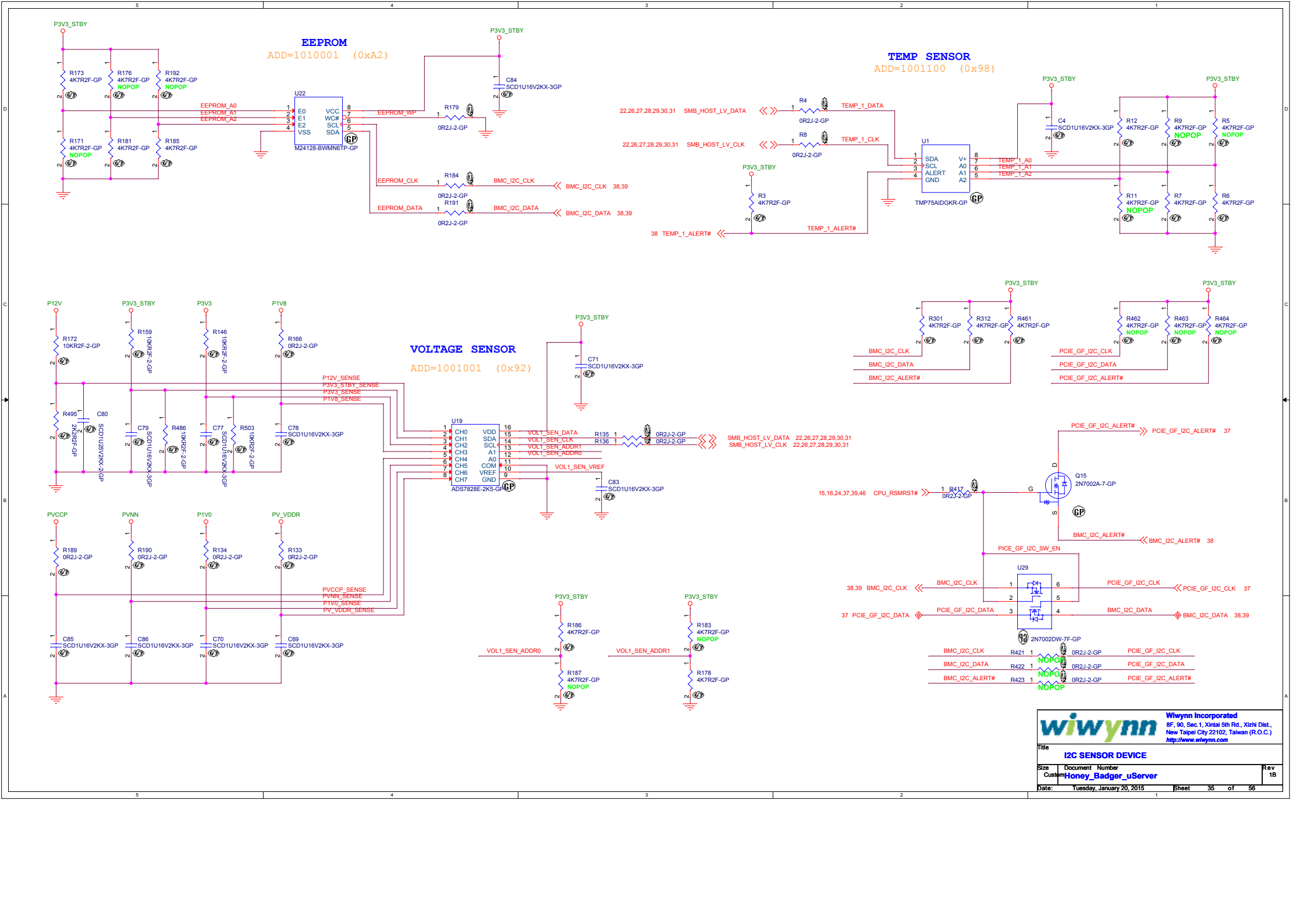
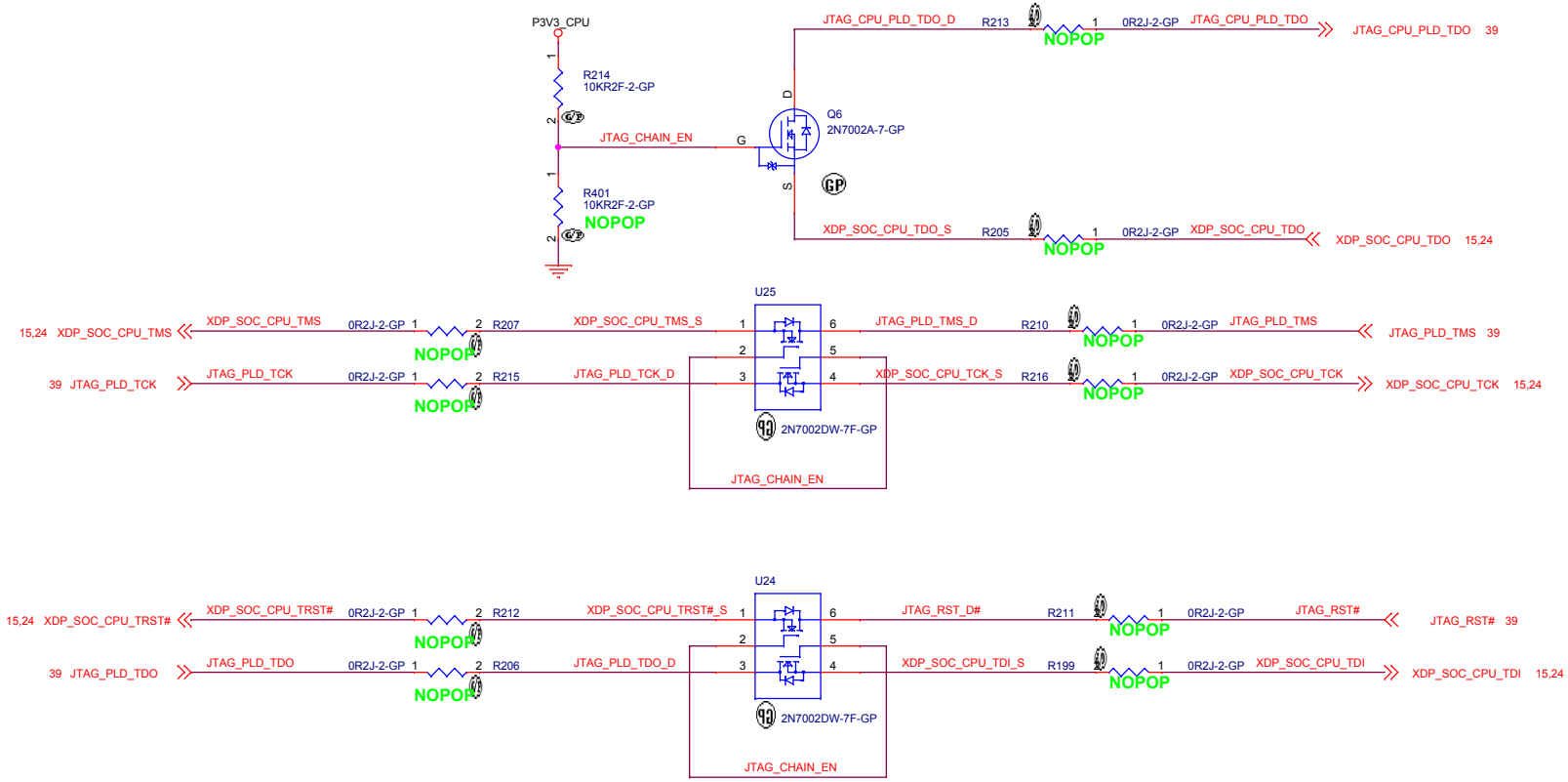


Wiwynn Incorporated		
8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.)		
http://www.wiwynn.com		
Title: NGFF		
Size: A3	Document Number: Honey_Badger_uServer	Rev: 1B
Date: Tuesday, January 20, 2015	Sheet 34 of 56	


EEPROM
ADD=1010001 (0xA2)
M24128-BWMN6TP-GP
TEMP SENSOR
ADD=1001100 (0x98)
TMP75AIDGKR-GP
VOLTAGE SENSOR
ADD=1001001 (0x92)
ADS7828E-2K5-GP
2N7002DW-7F-GP
2N7002A-7-GP
Wiwynn Incorporated
8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist.,
New Taipei City 22102, Taiwan (R.O.C.)
http://www.wiwynn.com
I2C SENSOR DEVICE
Honey_Badger_uServer
Tuesday, January 20, 2015



Wiwynn Incorporated 8F, 90, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22102, Taiwan (R.O.C.) http://www.wiwynn.com		
Title: BLANK		
Size: A3	Document Number: Honey_Badger_uServer	Rev: 1B
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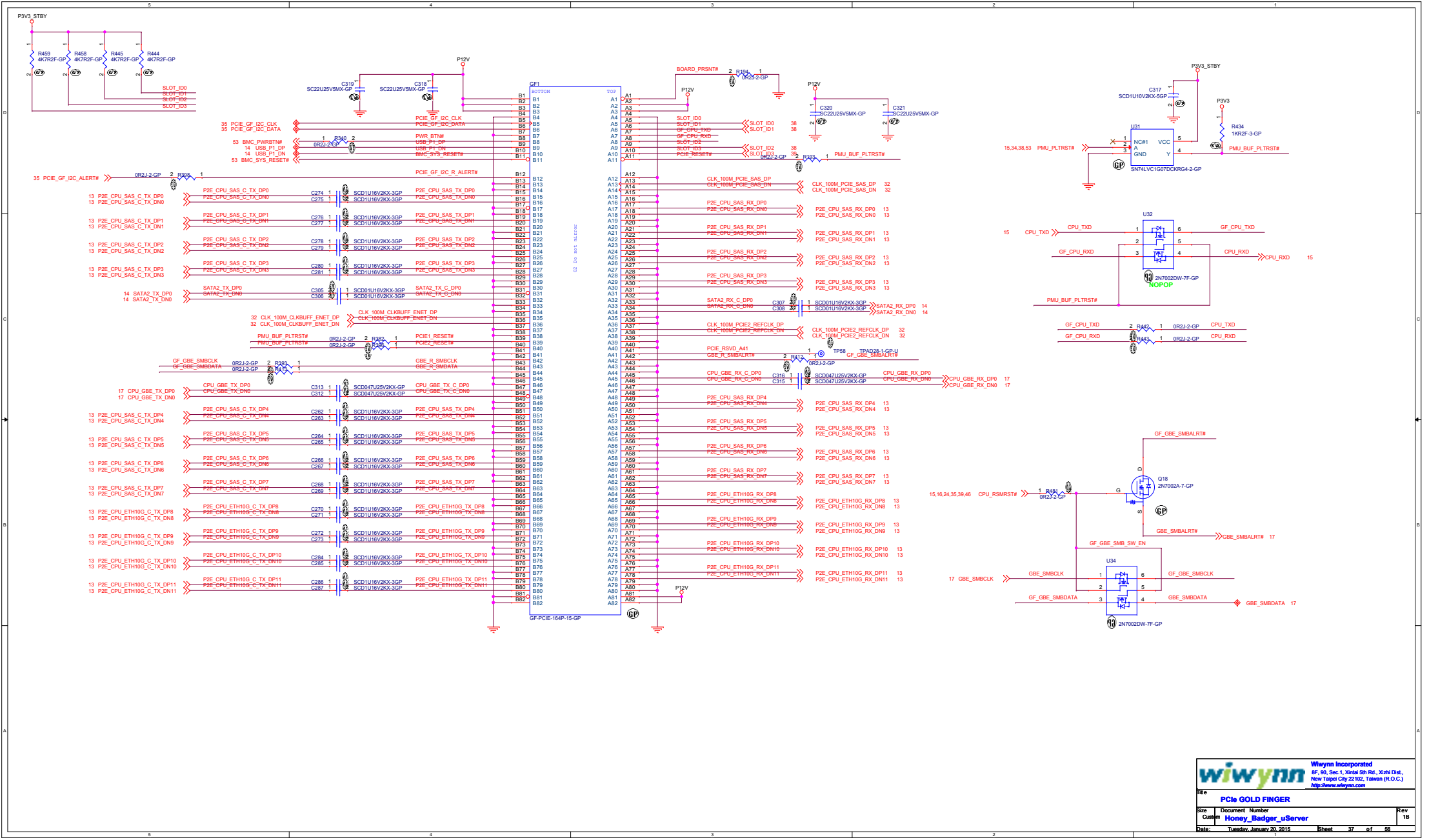
P3V3_STBY
R459 4K7R2F-GP
R458 4K7R2F-GP
R445 4K7R2F-GP
R444 4K7R2F-GP
SLOT_ID0
SLOT_ID1
SLOT_ID2
SLOT_ID3
P12V
C319 SC22U25V5MX-GP
C318 SC22U25V5MX-GP
GF1
BOTTOM
TOP
GF-PCIE-164P-15-GP
PCIE_GF_I2C_CLK
PCIE_GF_I2C_DATA
PWR_BTN#
USB_P1_DP
USB_P1_DN
BMC_SYS_RESET#
PCIE_GF_I2C_R_ALERT#
P2E_CPU_SAS_C_TX_DP0
P2E_CPU_SAS_C_TX_DN0
P2E_CPU_SAS_C_TX_DP1
P2E_CPU_SAS_C_TX_DN1
P2E_CPU_SAS_C_TX_DP2
P2E_CPU_SAS_C_TX_DN2
P2E_CPU_SAS_C_TX_DP3
P2E_CPU_SAS_C_TX_DN3
SATA2_TX_DP0
SATA2_TX_DN0
CLK_100M_CLKBUFF_ENET_DP
CLK_100M_CLKBUFF_ENET_DN
PMU_BUF_PLTRST#
PCIE1_RESET#
PCIE2_RESET#
GF_GBE_SMBCLK
GF_GBE_SMBDATA
GBE_R_SMBCLK
GBE_R_SMBDATA
CPU_GBE_TX_DP0
CPU_GBE_TX_DN0
P2E_CPU_SAS_C_TX_DP4
P2E_CPU_SAS_C_TX_DN4
P2E_CPU_SAS_C_TX_DP5
P2E_CPU_SAS_C_TX_DN5
P2E_CPU_SAS_C_TX_DP6
P2E_CPU_SAS_C_TX_DN6
P2E_CPU_SAS_C_TX_DP7
P2E_CPU_SAS_C_TX_DN7
P2E_CPU_ETH10G_C_TX_DP8
P2E_CPU_ETH10G_C_TX_DN8
P2E_CPU_ETH10G_C_TX_DP9
P2E_CPU_ETH10G_C_TX_DN9
P2E_CPU_ETH10G_C_TX_DP10
P2E_CPU_ETH10G_C_TX_DN10
P2E_CPU_ETH10G_C_TX_DP11
P2E_CPU_ETH10G_C_TX_DN11
SCD1U16V2KX-3GP
SCD047U25V2KX-GP
BOARD_PRSNT#
CLK_100M_PCIE_SAS_DP
CLK_100M_PCIE_SAS_DN
P2E_CPU_SAS_RX_DP0
P2E_CPU_SAS_RX_DN0
P2E_CPU_SAS_RX_DP1
P2E_CPU_SAS_RX_DN1
P2E_CPU_SAS_RX_DP2
P2E_CPU_SAS_RX_DN2
P2E_CPU_SAS_RX_DP3
P2E_CPU_SAS_RX_DN3
SATA2_RX_C_DP0
SATA2_RX_C_DN0
CLK_100M_PCIE2_REFCLK_DP
CLK_100M_PCIE2_REFCLK_DN
PCIE_RSVD_A41
GBE_R_SMBALRT#
TPAD28-1-GP-U
GF_GBE_SMBALRT#
CPU_GBE_RX_C_DP0
CPU_GBE_RX_C_DN0
CPU_GBE_RX_DP0
CPU_GBE_RX_DN0
P2E_CPU_SAS_RX_DP4
P2E_CPU_SAS_RX_DN4
P2E_CPU_SAS_RX_DP5
P2E_CPU_SAS_RX_DN5
P2E_CPU_SAS_RX_DP6
P2E_CPU_SAS_RX_DN6
P2E_CPU_SAS_RX_DP7
P2E_CPU_SAS_RX_DN7
P2E_CPU_ETH10G_RX_DP8
P2E_CPU_ETH10G_RX_DN8
P2E_CPU_ETH10G_RX_DP9
P2E_CPU_ETH10G_RX_DN9
P2E_CPU_ETH10G_RX_DP10
P2E_CPU_ETH10G_RX_DN10
P2E_CPU_ETH10G_RX_DP11
P2E_CPU_ETH10G_RX_DN11
SLOT_ID0
SLOT_ID1
SLOT_ID2
SLOT_ID3
GF_CPU_TXD
GF_CPU_RXD
PCIE_RESET#
C320 SC22U25V5MX-GP
C321 SC22U25V5MX-GP
R183 PMU_BUF_PLTRST#
C317 SCD1U10V2KX-5GP
P3V3
R434 1KR2F-3-GP
U31
NC#1
VCC
A
GND
Y
SN74LVC1G07DCKRG4-2-GP
U32
CPU_TXD
CPU_RXD
2N7002DW-7F-GP
NOPOP
R442
R443
Q18
2N7002A-7-GP
CPU_RSMRST#
GBE_SMBALRT#
GF_GBE_SMB_SW_EN
U34
GBE_SMBCLK
GBE_SMBDATA
GF_GBE_SMBCLK
GF_GBE_SMBDATA
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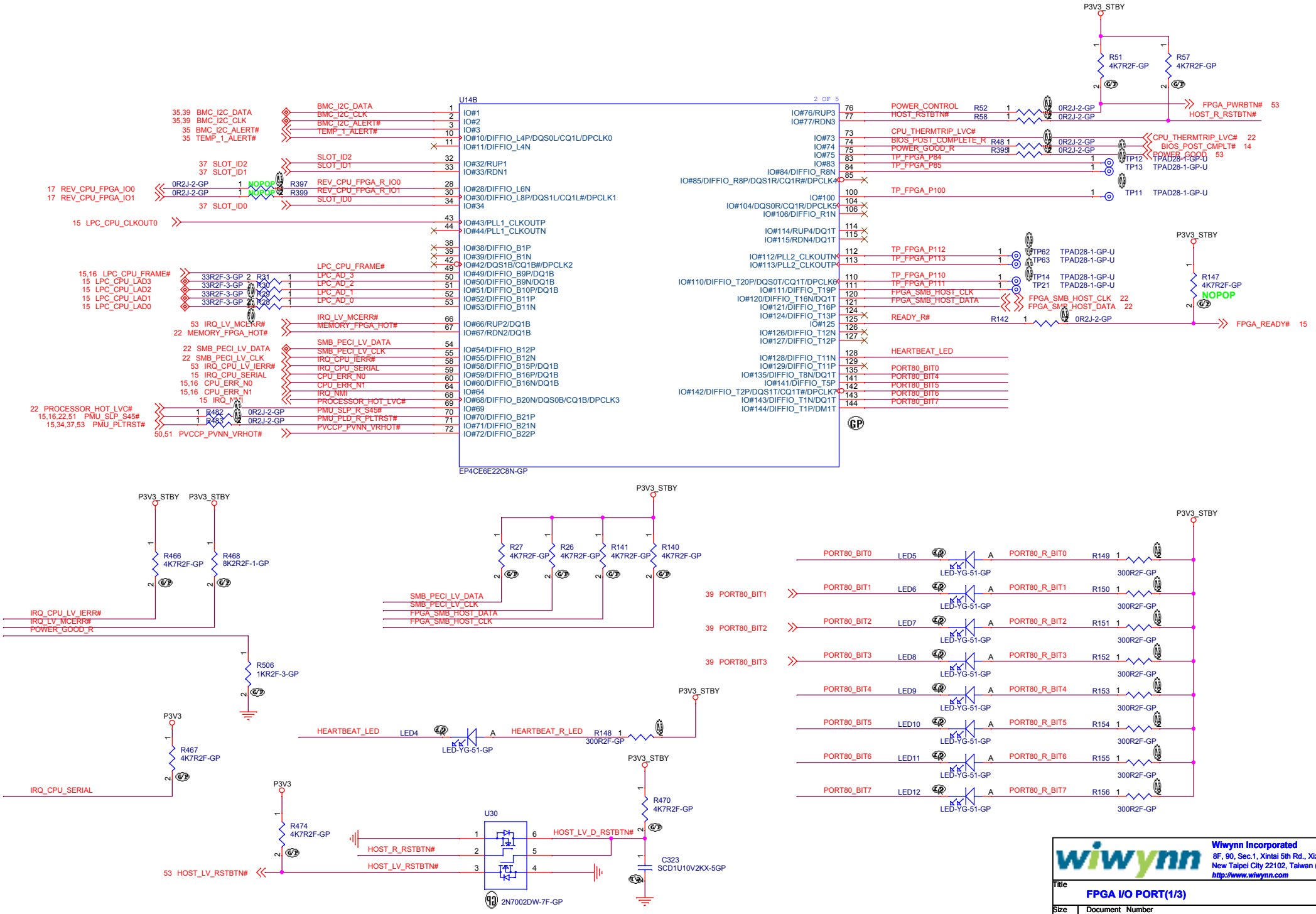

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Title	FPGA I/O PORT(1/3)
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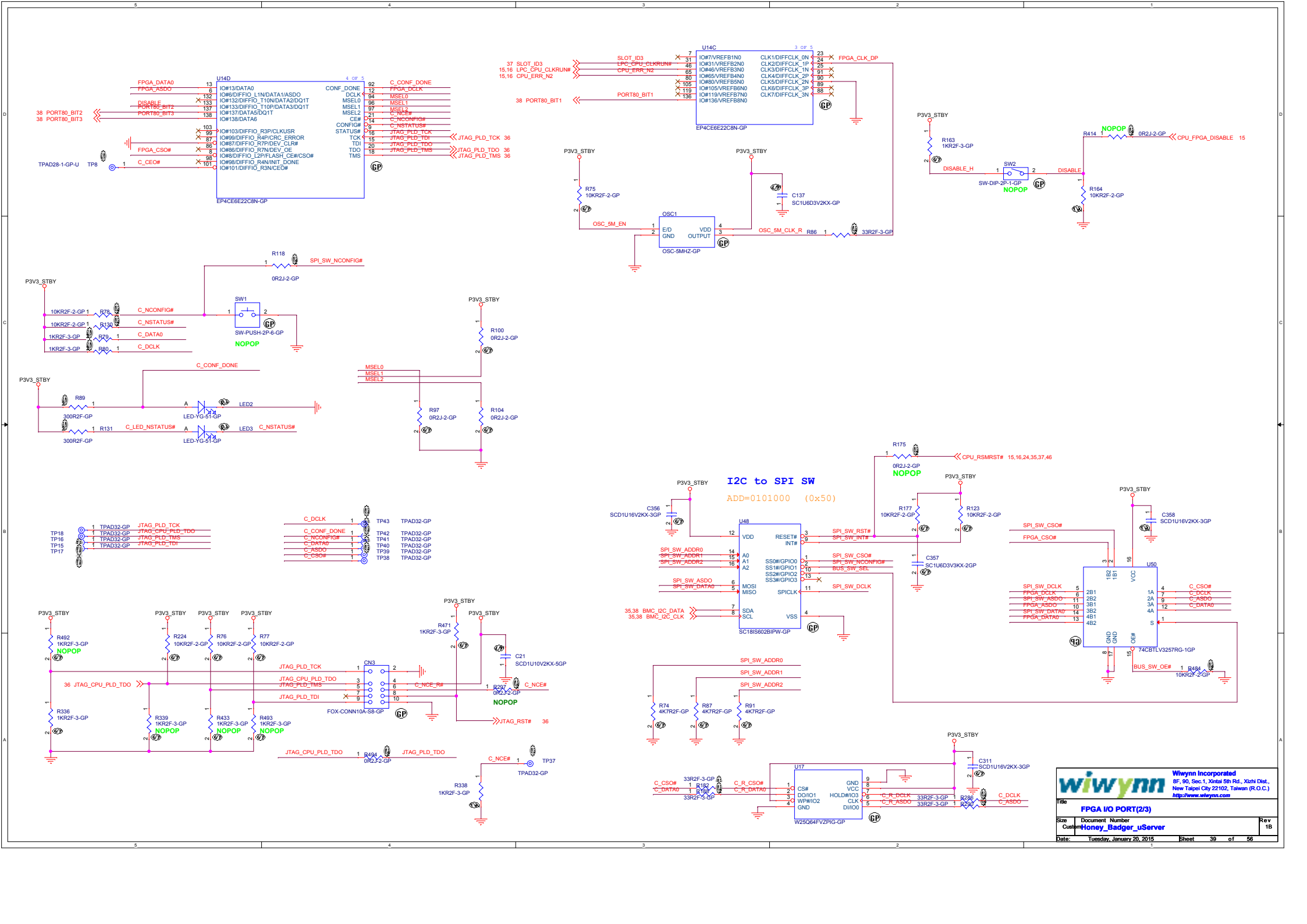
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FPGA_ASDO
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PORT80_BIT2
PORT80_BIT3
FPGA_CSO#
C_CEO#
TPAD28-1-GP-U
TP8
C_CONF_DONE
FPGA_DCLK
MSEL0
MSEL1
MSEL2
C_NCE#
C_NCONFIG#
C_NSTATUS#
JTAG_PLD_TCK
JTAG_PLD_TDI
JTAG_PLD_TDO
JTAG_PLD_TMS
U114C
EP4CE6E22C8N-GP
SLOT_ID3
LPC_CPU_CLKRUN#
CPU_ERR_N2
PORT80_BIT1
FPGA_CLK_DP
P3V3_STBY
R75
10KR2F-2-GP
OSC1
OSC-5MHZ-GP
OSC_5M_EN
OSC_5M_CLK_R
R86
33R2F-3-GP
C137
SC1U6D3V2KX-GP
R163
1KR2F-3-GP
SW2
SW-DIP-2P-1-GP
DISABLE_H
DISABLE
R164
10KR2F-2-GP
R414
0R2J-2-GP
NOPOP
CPU_FPGA_DISABLE
R118
SPI_SW_NCONFIG#
SW1
SW-PUSH-2P-6-GP
R78
R130
R79
R80
C_DATA0
C_DCLK
R100
R97
R104
MSEL0
MSEL1
MSEL2
R89
300R2F-GP
R131
LED2
LED3
LED-YG-51-GP
C_LED_NSTATUS#
C_NSTATUS#
TP18
TP16
TP15
TP17
TPAD32-GP
JTAG_CPU_PLD_TDO
JTAG_PLD_TMS
JTAG_PLD_TDI
TP43
TP42
TP41
TP40
TP39
TP38
C_ASDO
C_CSO#
R492
R224
R76
R77
R336
R339
R433
R493
R471
C21
SCD1U10V2KX-5GP
CN3
FOX-CONN10A-S8-GP
R297
JTAG_RST#
R494
C_NCE#
TP37
R338
I2C to SPI SW
ADD=0101000 (0x50)
U48
SC18IS602BIPW-GP
C356
SCD1U16V2KX-3GP
R175
CPU_RSMRST#
R177
R123
C357
SC1U6D3V3KX-2GP
SPI_SW_RST#
SPI_SW_INT#
SPI_SW_CSO#
SPI_SW_NCONFIG#
BUS_SW_SEL
SPI_SW_DCLK
SPI_SW_ASDO
SPI_SW_DATA0
SPI_SW_ADDR0
SPI_SW_ADDR1
SPI_SW_ADDR2
35,38 BMC_I2C_DATA
35,38 BMC_I2C_CLK
U50
74CBTLV3257RG-1GP
BUS_SW_OE#
R494
C358
R74
R87
R91
4K7R2F-GP
U17
W25Q64FVZPIG-GP
C_CSO#
C_DATA0
C_R_CSO#
C_R_DATA0
C_R_DCLK
C_R_ASDO
C311
R286
R287
C_DCLK
C_ASDO
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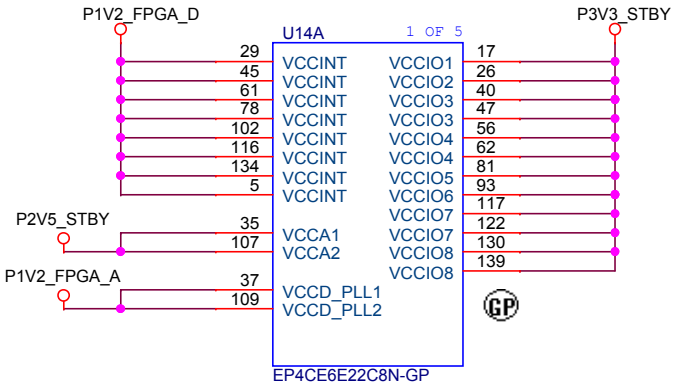

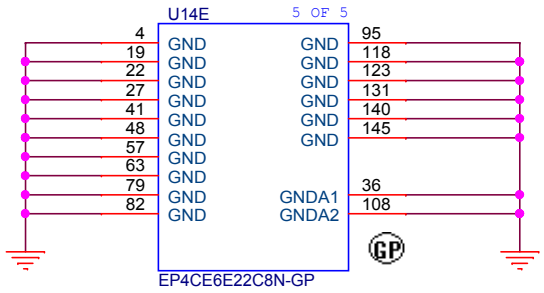

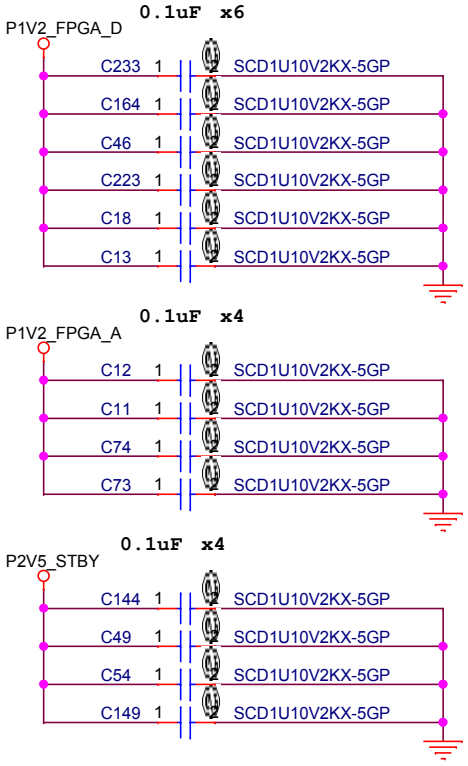

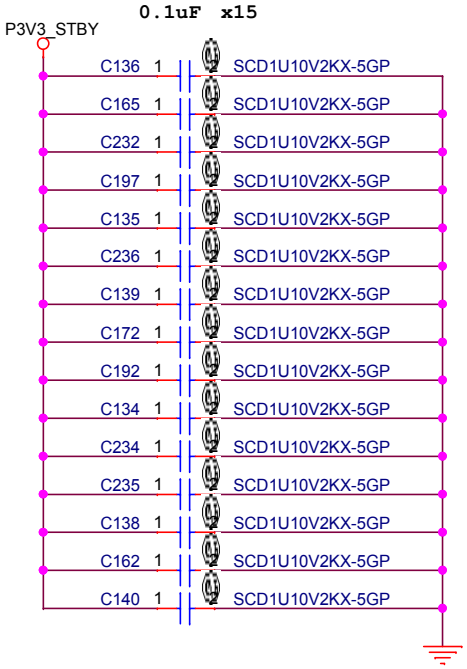

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Title: FPGA POWER&GND (3/3)

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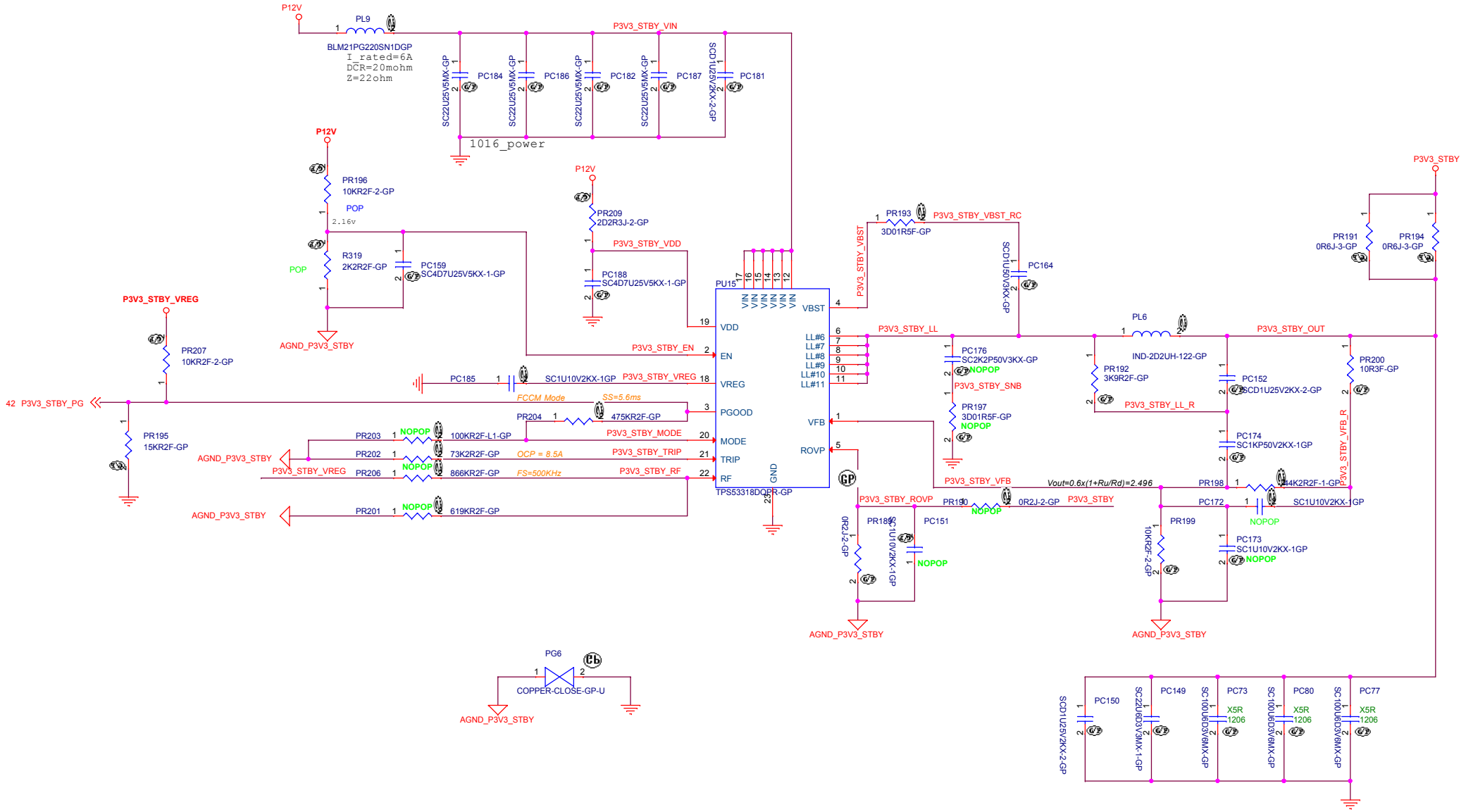
Power rail : P3V3_STBY(3.3V)
Controller : TPS53318 (Fswitching=500KHz)
TDC : 3.24A
MAX : 4.5A
OCP : 7A



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Title: PWRSW_P3V3_STBY		
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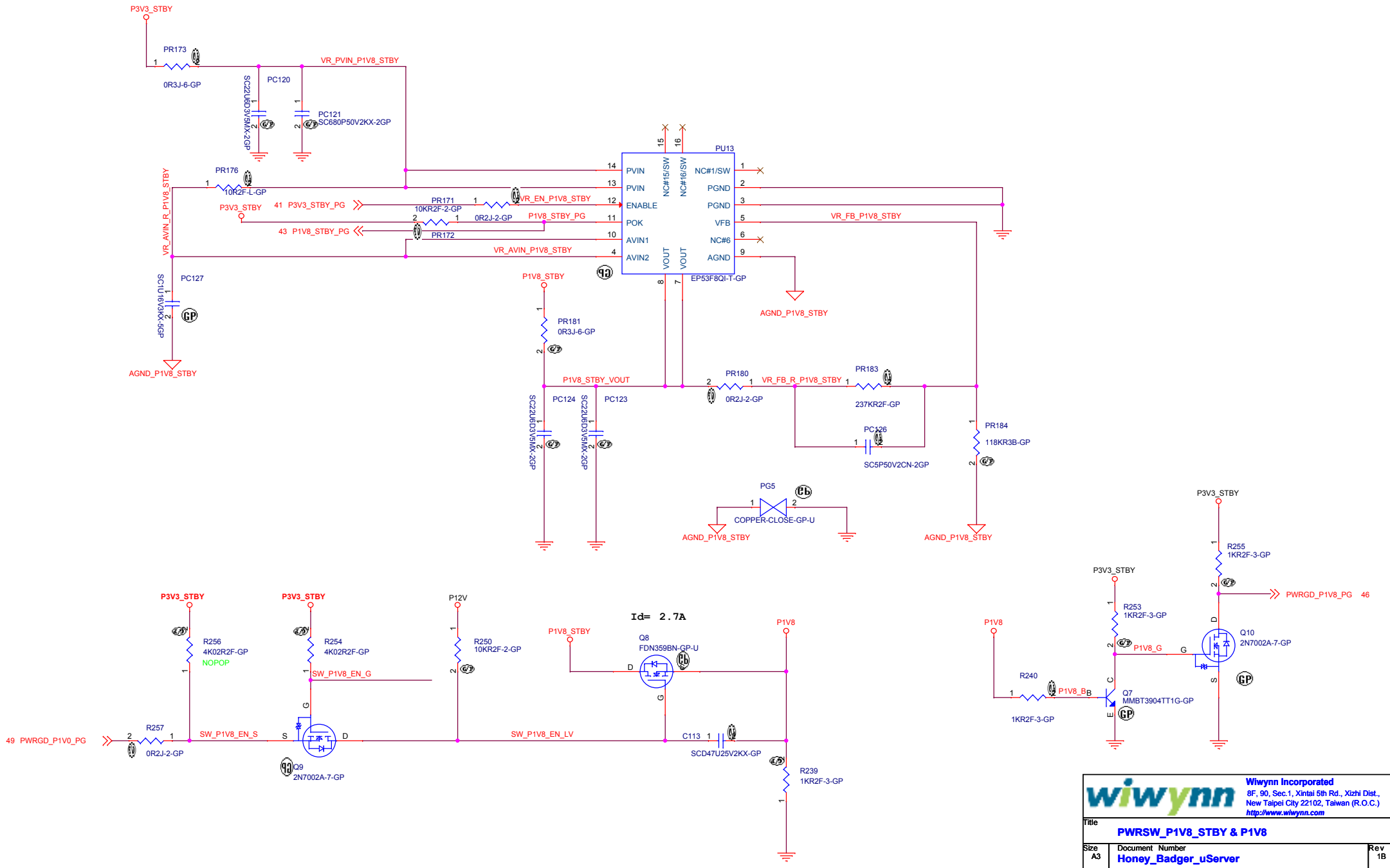
Power rail : P1V8_STBY
Controller : EP53F8QI (Fswitching=4MHz)
TDC :1.04A
MAX :1.04A
OCP :3.2A



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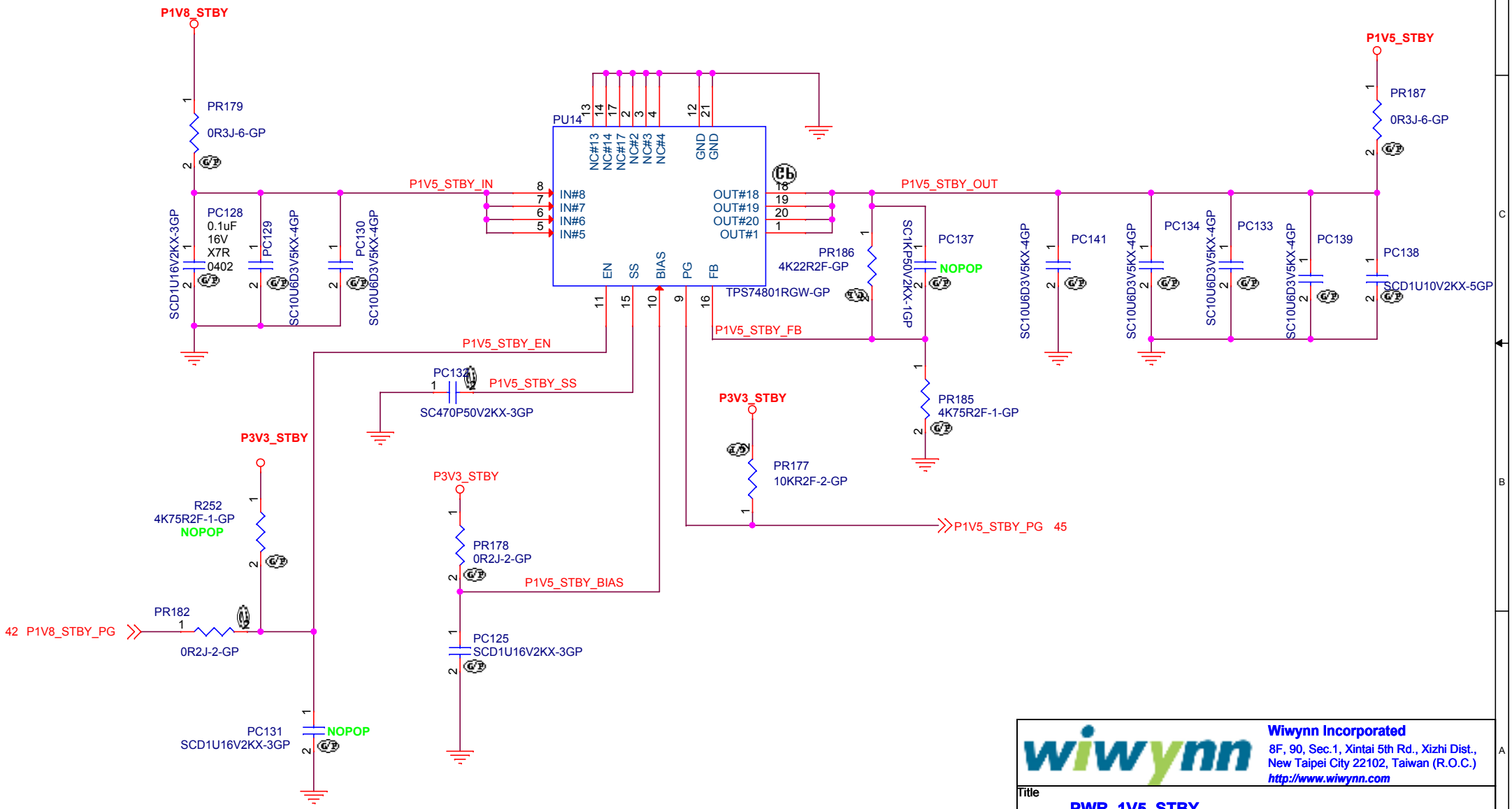
Power rail :P1V5_STBY
Controller :TPS74801
TDC :0.415A
Max :0.415A
OCP:2A



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Title: PWR_1V5_STBY		
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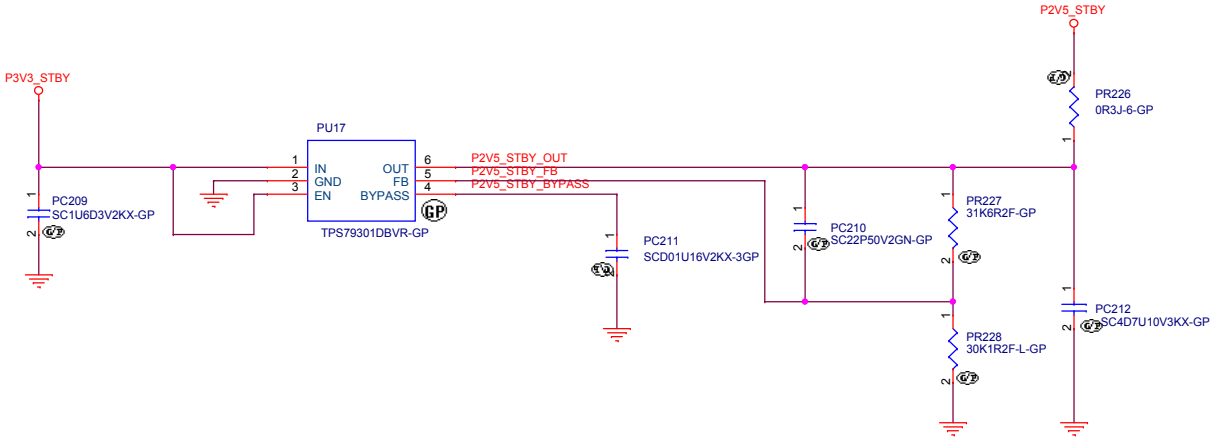
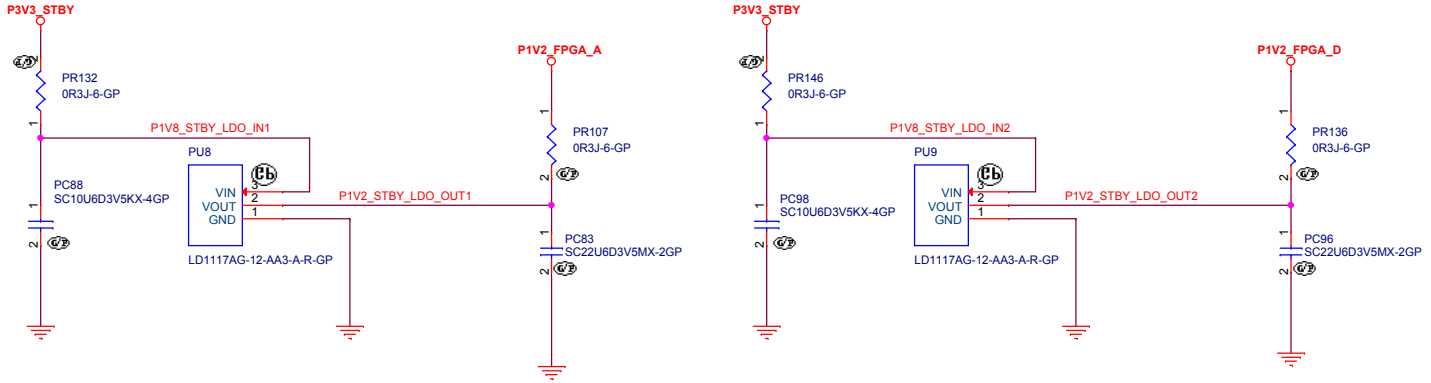
Power rail :P2V5_STBY
Controller :TPS79301
TDC : 0.034A
Max :0.034A



Power rail :P1V2_STBY(1.2V)
Controller :LD1117AG
TDC :0.2A
Max :0.2A



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Title	PWR_2V5&1V2_STBY	
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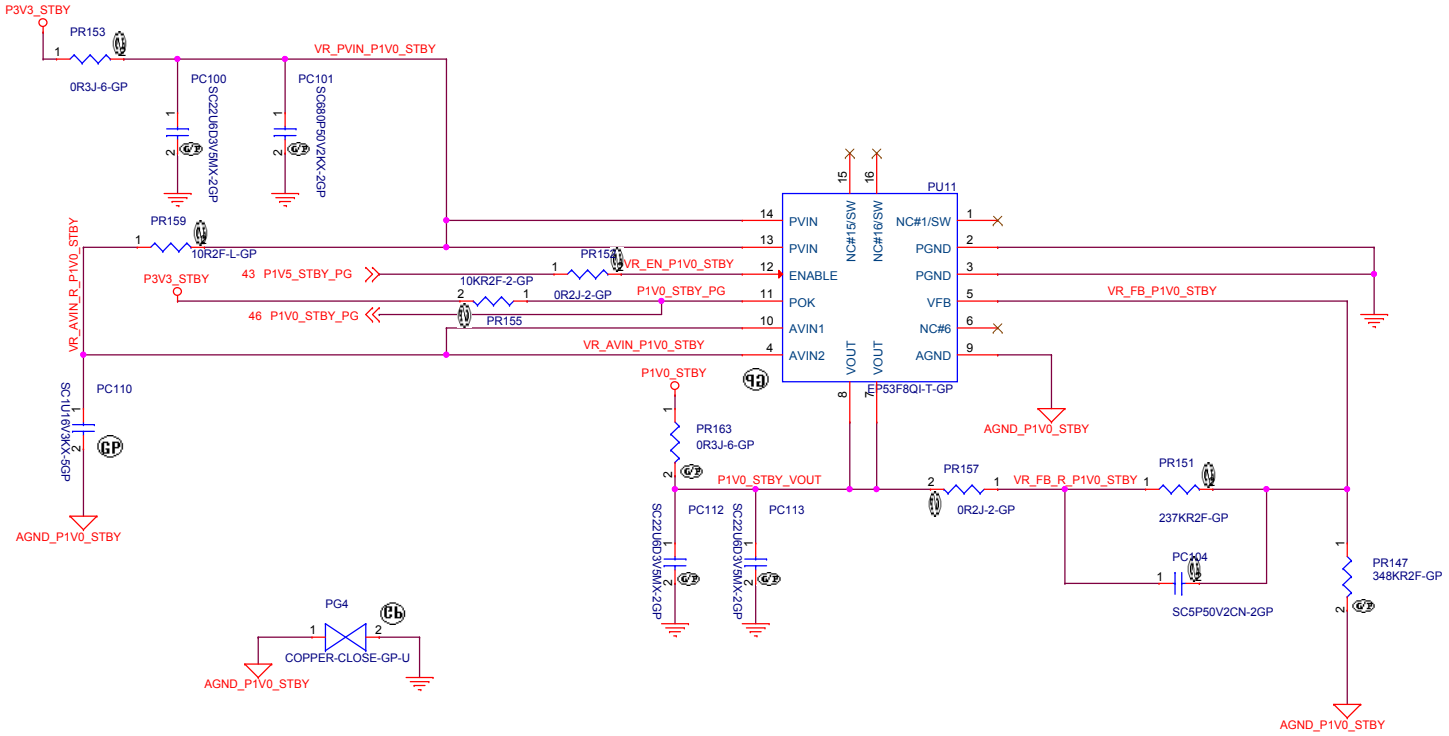
Power rail : P1V0_STBY
Controller : EP53F8QI (Fswitching=4MHz)
TDC :1.2A
MAX :1.2A
OCP :3.2A



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Title: PWRSW_P1V0_STBY		
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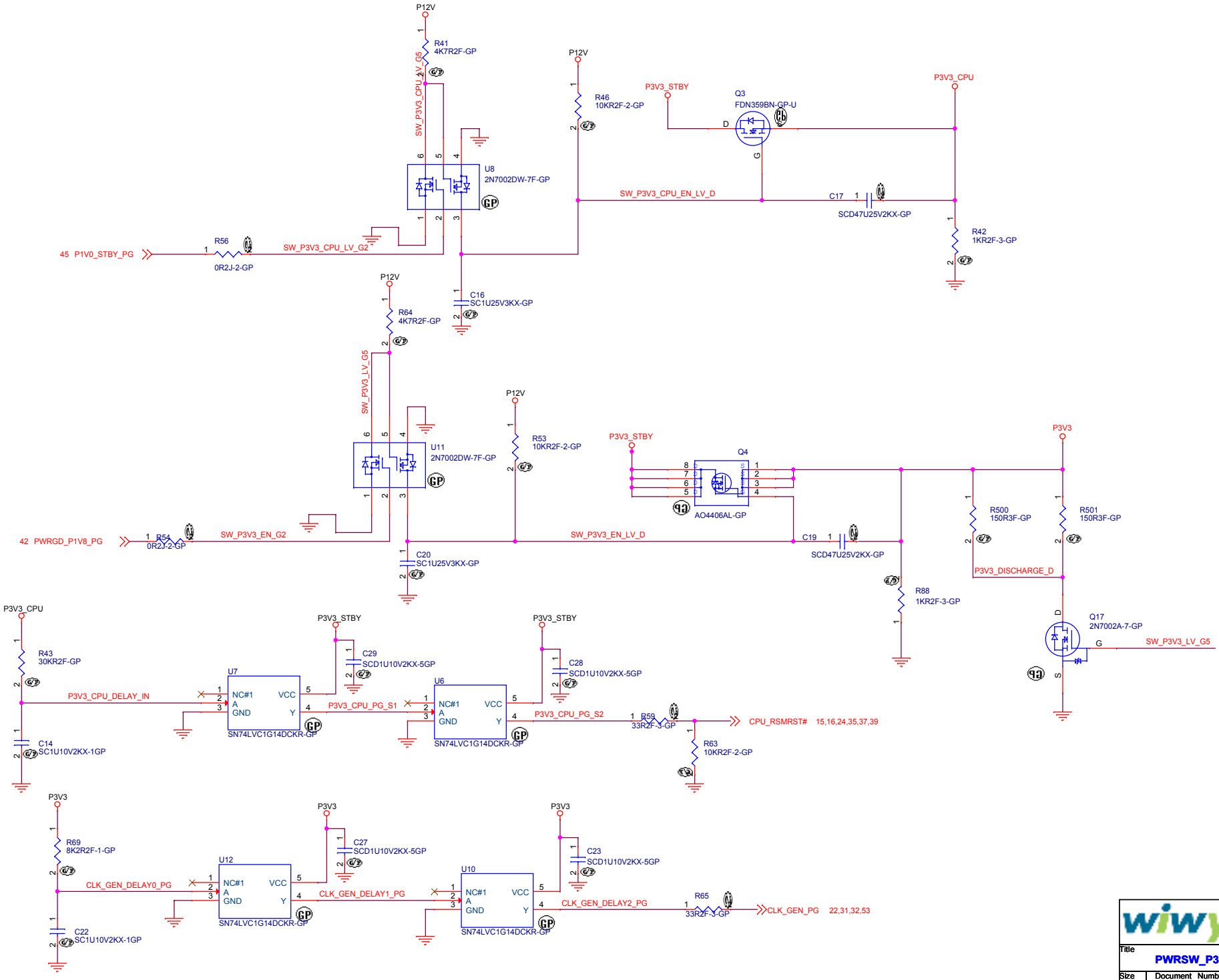

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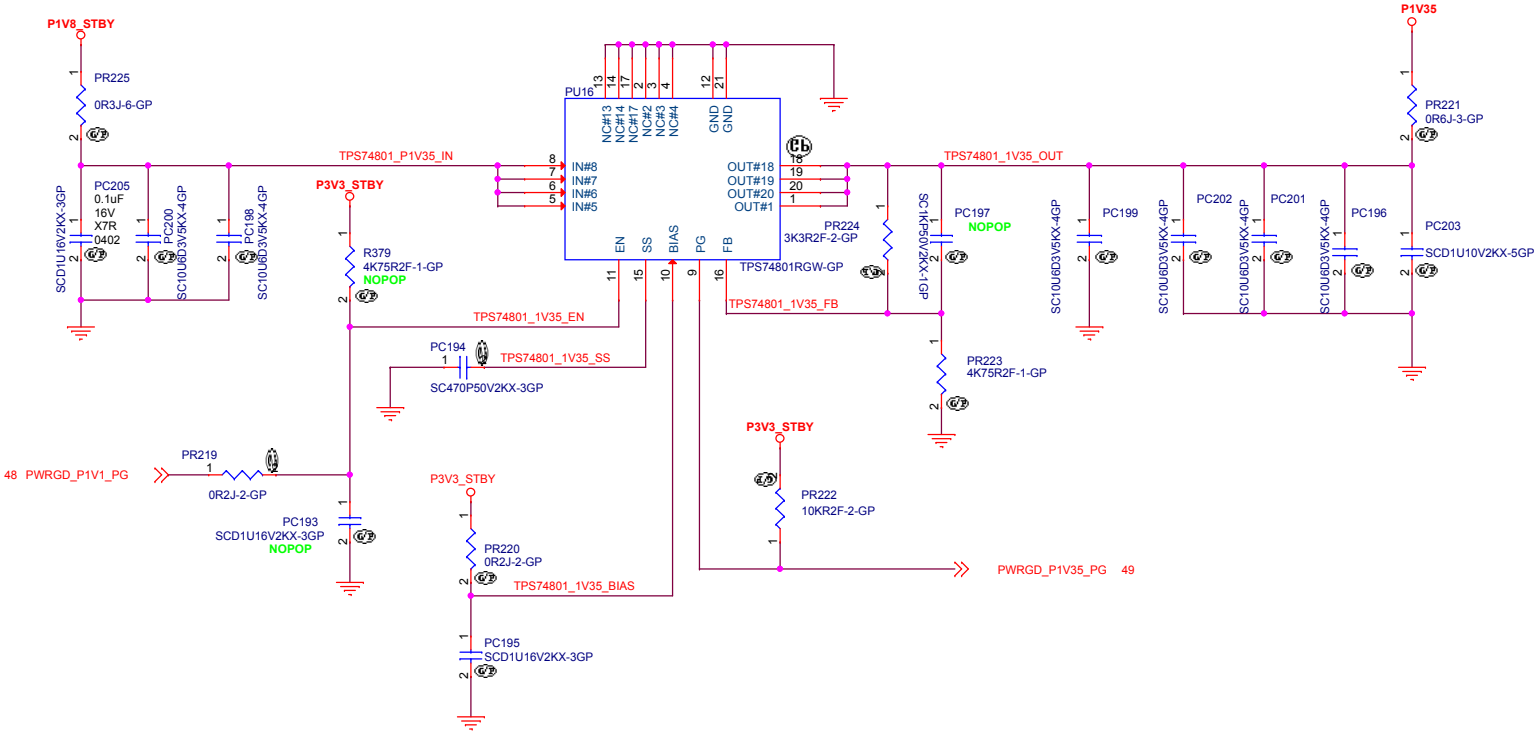
Power rail :P1V35(1.35V)
Controller :TPS74801
TDC :0.034A
Max :0.034A
OCP:2A



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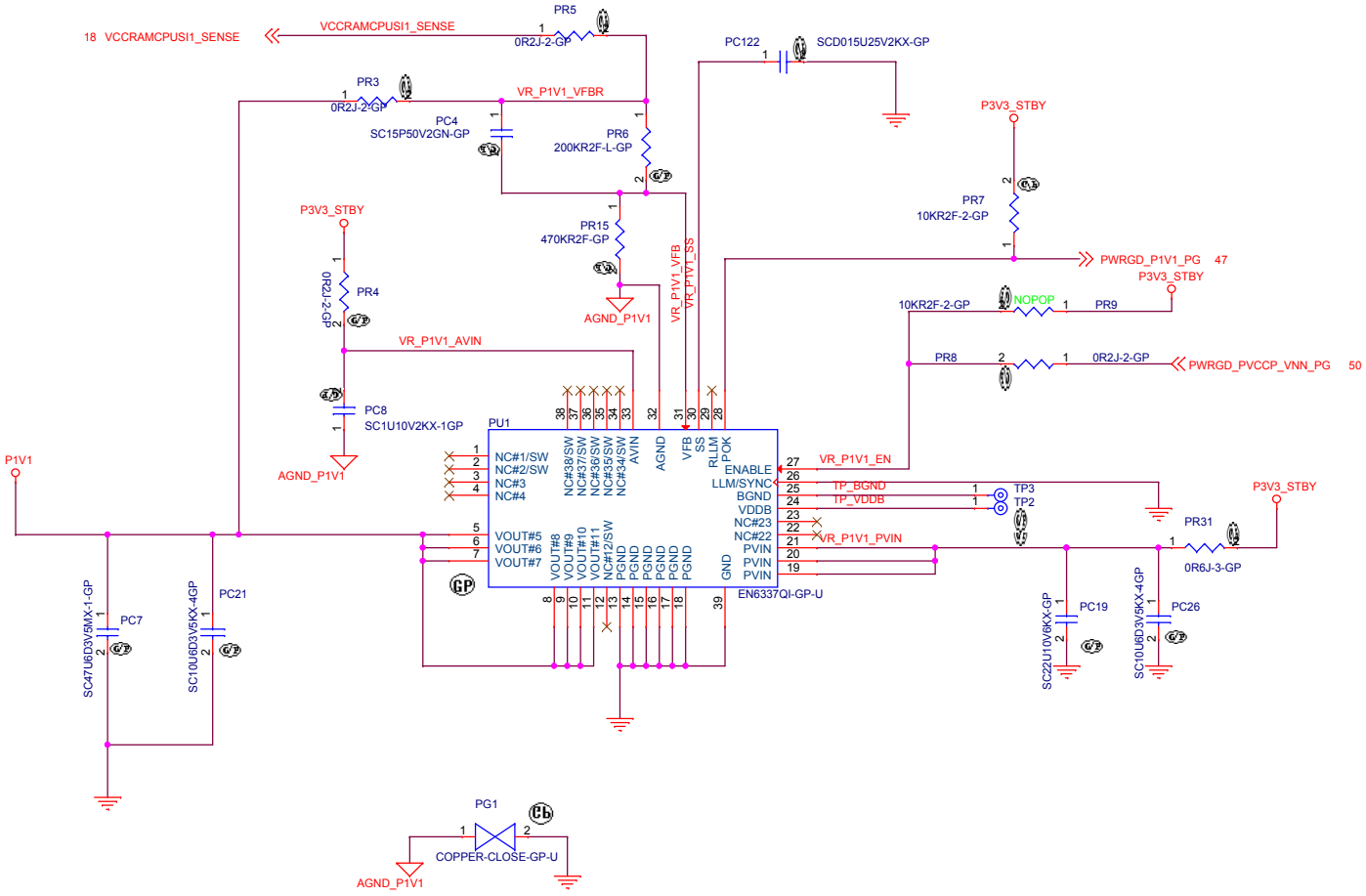
Power rail : P1V1(1.07)
Controller : EN6337 (Fswitching=2MHz)
TDC :2.8A
MAX :2.8A
OCP :5A



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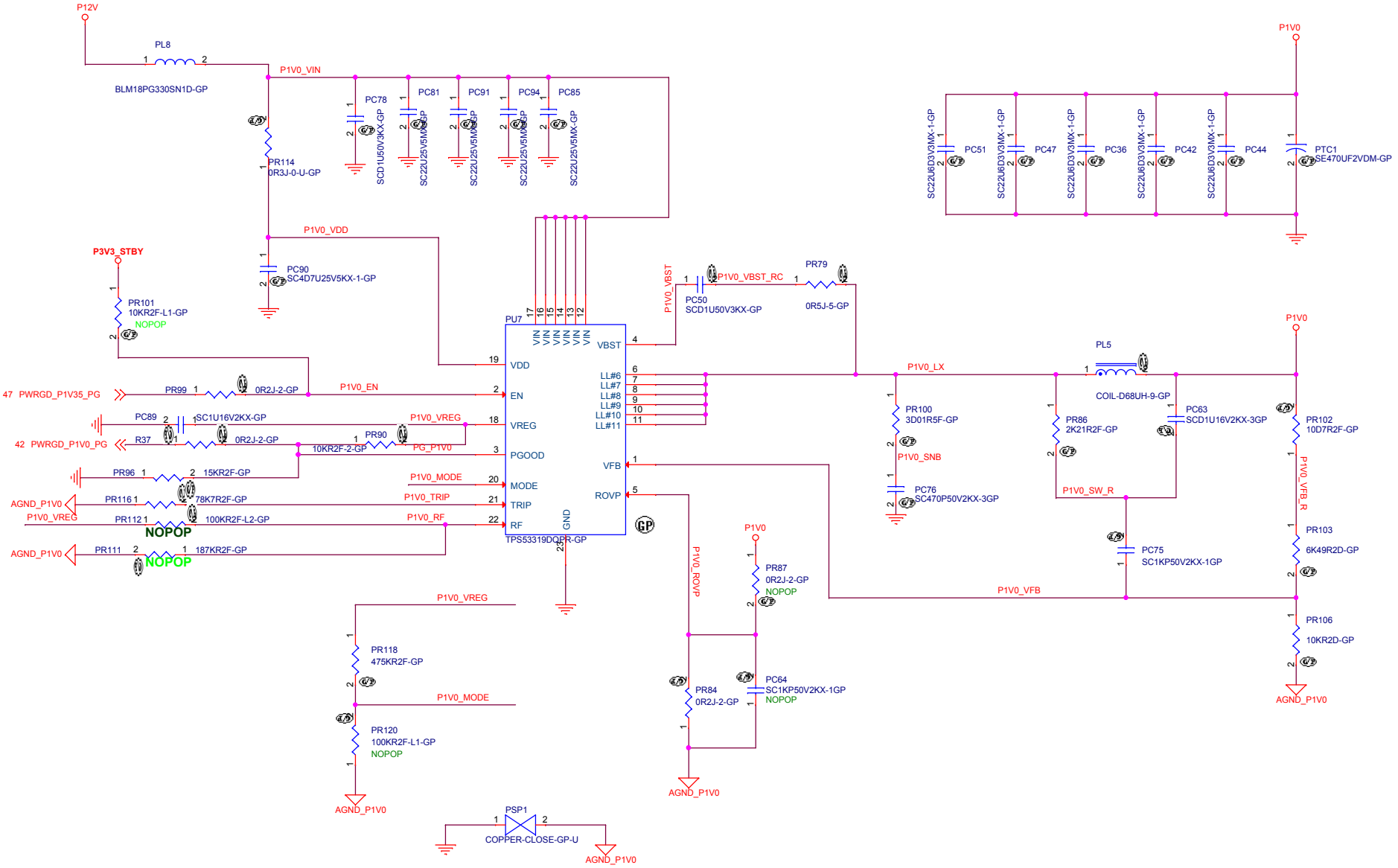
Power rail :P1V0(1.0V)
Controller :TPS53319
Fswitch= 300KHz
TDC : TBD
Max : 6.9A
OCP :8A



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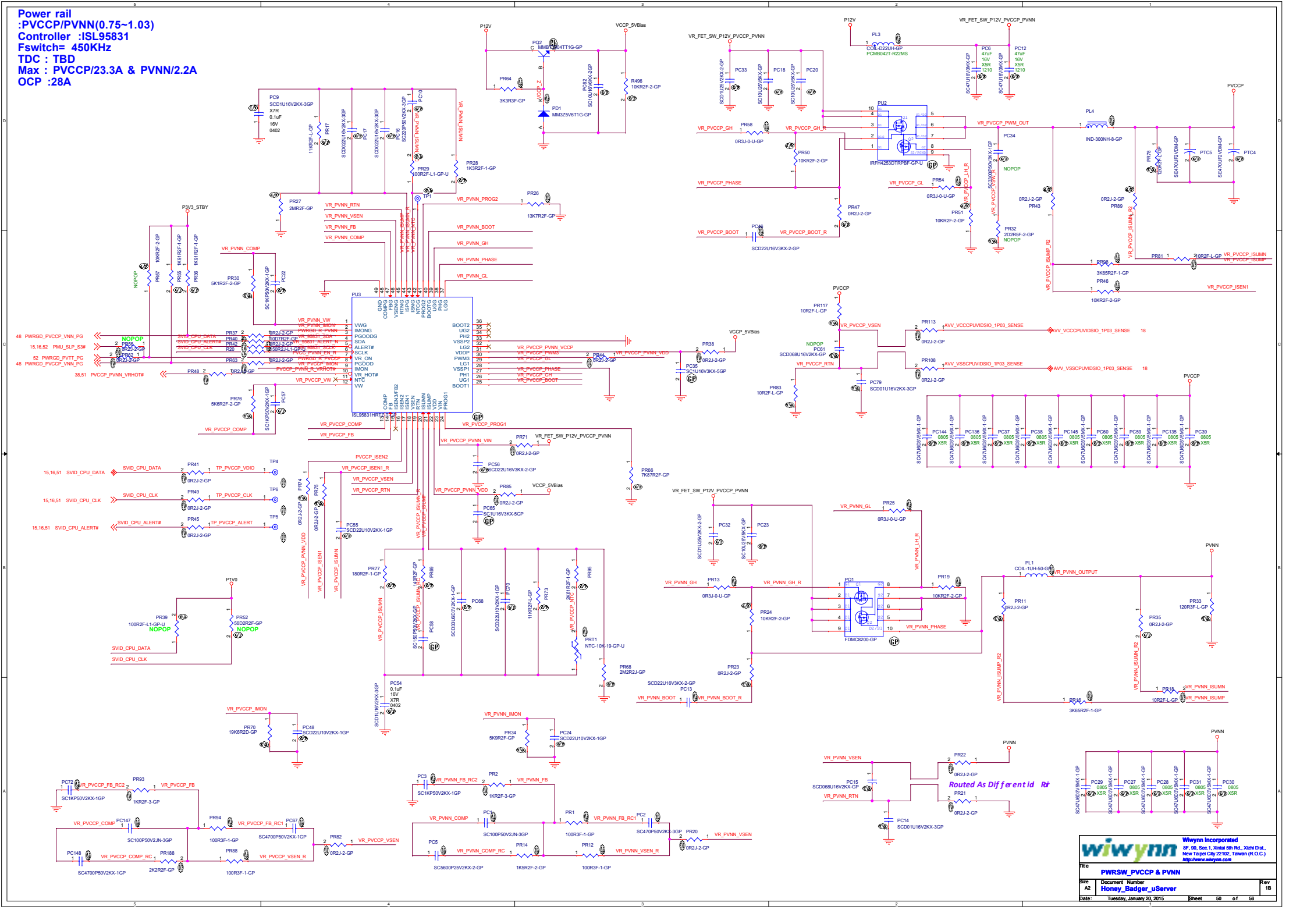
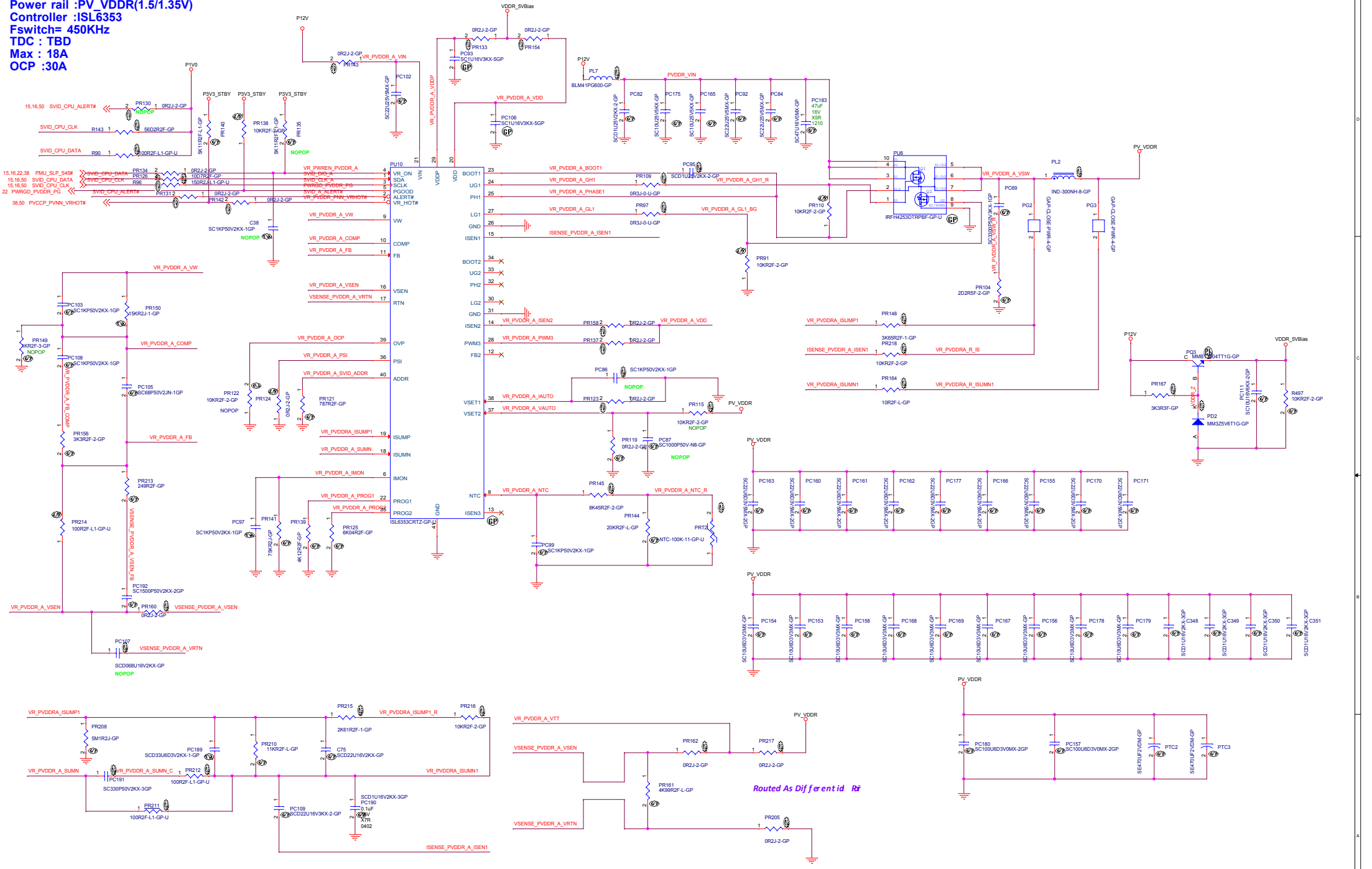
Power rail
:PVCCP/PVNN(0.75~1.03)
Controller :ISL95831
Fswitch= 450KHz
TDC : TBD
Max : PVCCP/23.3A & PVNN/2.2A
OCP :28A



Power rail :PV_VDDR(1.5/1.35V)
Controller :ISL6353
Fswitch= 450KHz
TDC : TBD
Max : 18A
OCP :30A



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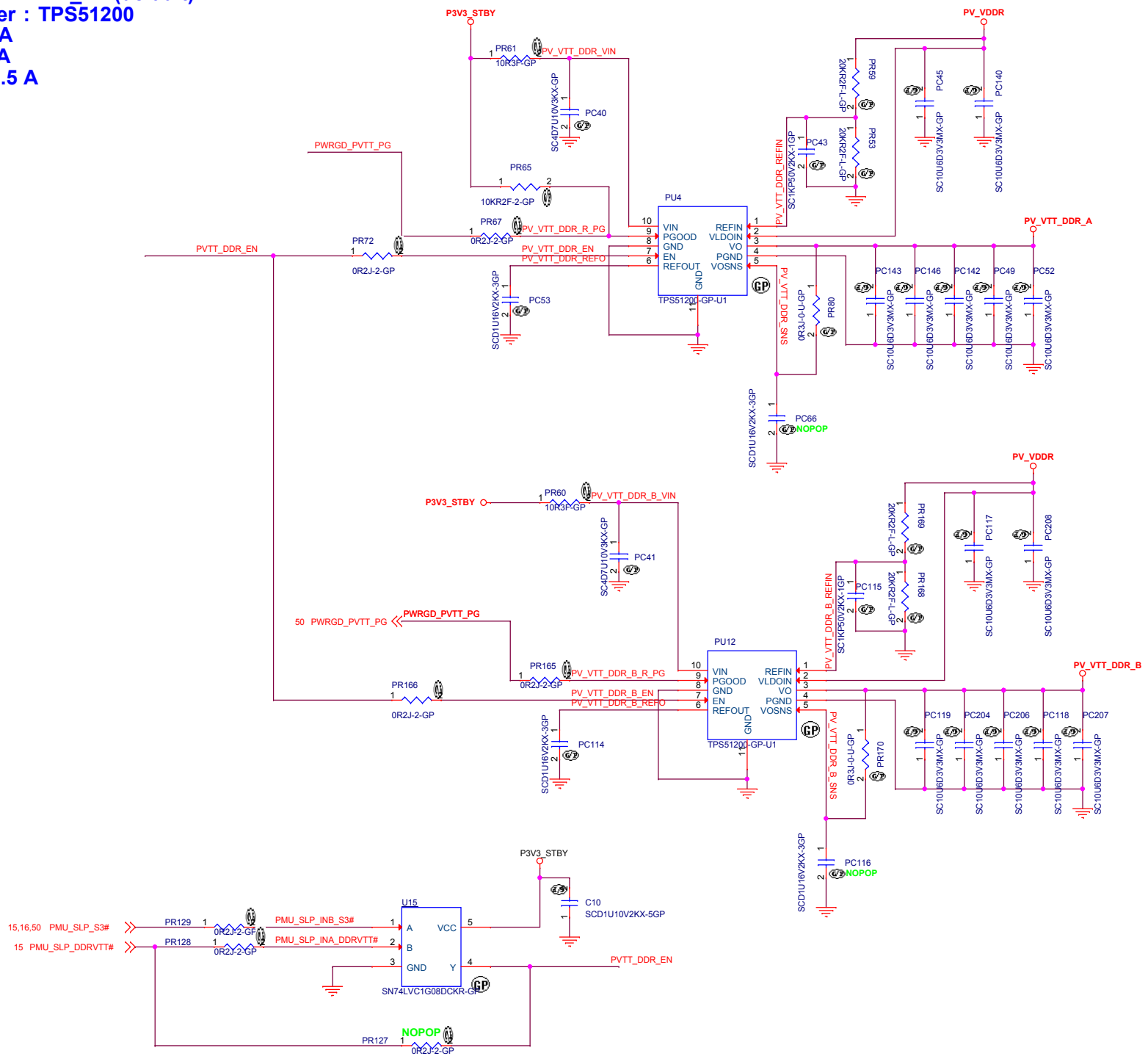
Power rail : PV_VTT_DDR
VID=1/2 PVDDR_N1 (default)
Controller : TPS51200
TDC : 1A
Max : 1A
OCP : 1.5 A



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Title	PWR_PV_VTT_DDR	
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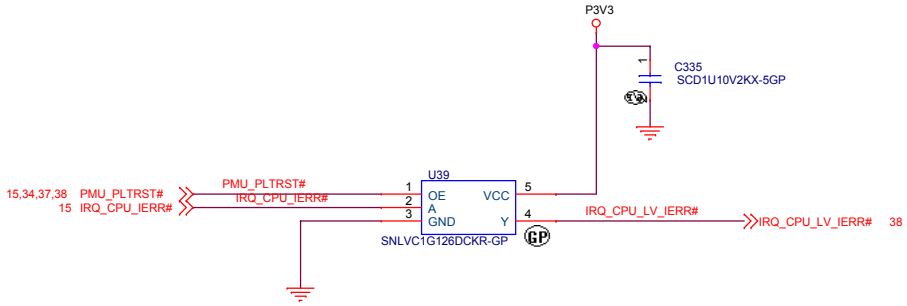

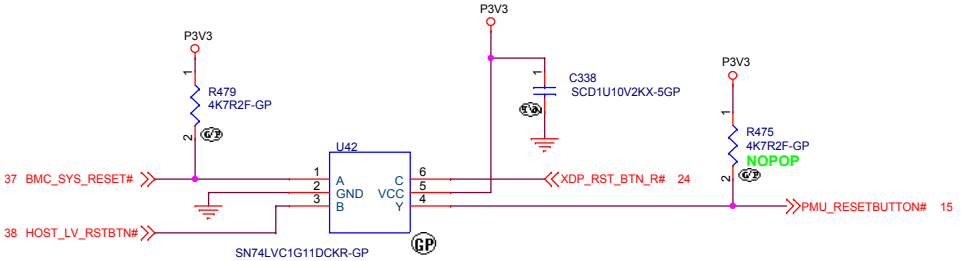

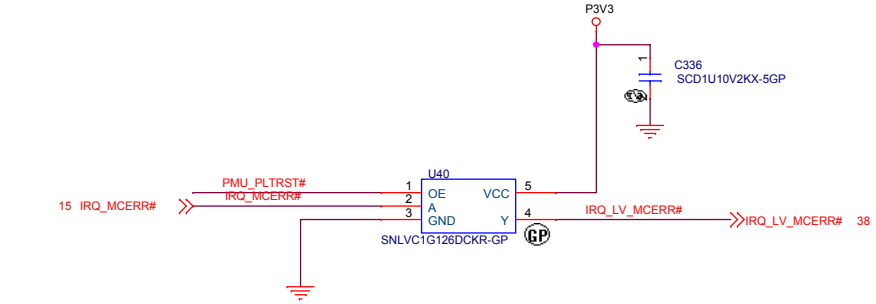

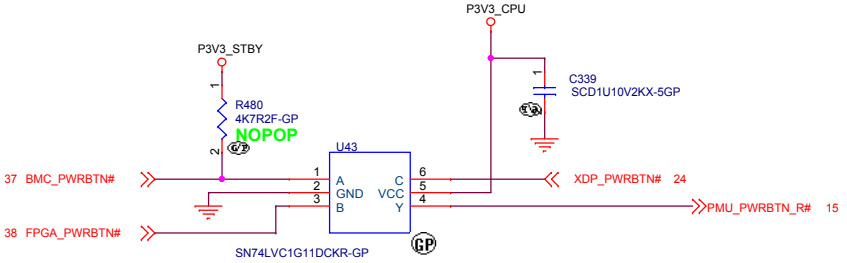

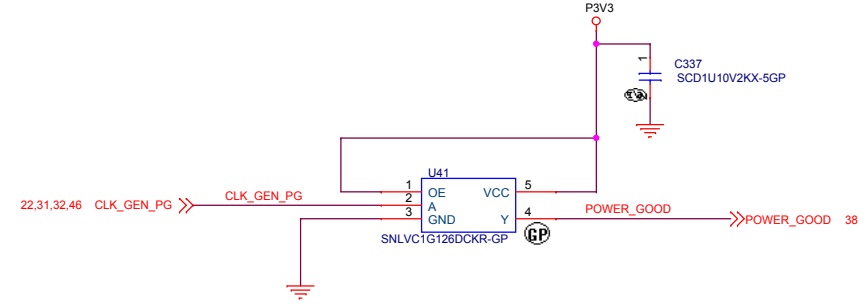

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Title: 053 ISOLATION CIRCUITRY		
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Title: BLANK		
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